RAIL TRANSIT: Review & Outlook

January 13, 1975

RAILWAY AGE

For passenger-car builders:

The best of times ...the worst of times

RD74 67
JAMES P CHEW
900 NORTH 4TH ST
JEANNETTE PA 15644

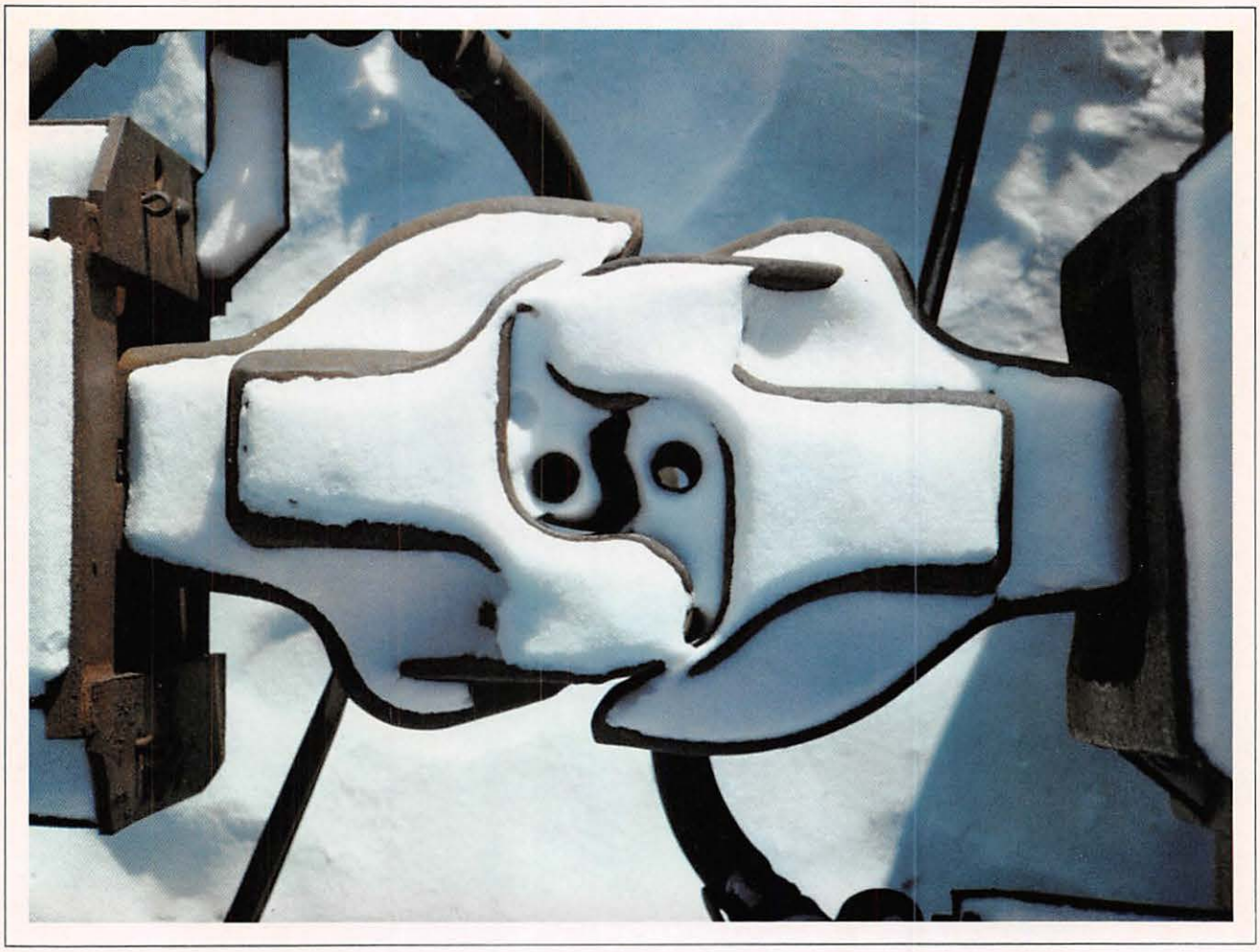


Photo by G. L. Thorp, Putney, Vermont—as printed in POPULAR PHOTOGRAPHY, November, 1970

ASF® Couplers are a Work of Art!

American Steel Foundries

ONE OF THE Amsted INDUSTRIES

PRUDENTIAL PLAZA • CHICAGO, ILLINOIS 60601

Circle 1 on Reader Service Card

ASF

NEED INFORMATION THAT CAN BE PUT TO WORK FOR YOU AND YOUR STAFF?

That's what you will find in the pages of **RAILWAY AGE** every month. Whether your departmental interests are executive, financial, legal, operating, traffic, marketing, sales, purchases & materials, mechanical, electrical, engineering, signaling, or communications, you will find reading **RAILWAY AGE** helpful.

——Use this card to subscribe for yourself or an associate.

——If you order 2 or more subscriptions (please list the names, company, titles, addresses and job responsibility information on a separate sheet) the money-saving two year rate is only $12.00.

One good idea from **RAILWAY AGE** will repay the small cost many times over!

ENCLOSE CHECK WITH ORDER AND GET EXTRA ISSUE AT NO ADDED COST.

OK

Enter my personal subscription to RAILWAY AGE

(Published twice each Month)

☐ $12 2 YEARS ☐ PAYMENT ENCLOSED

☐ $8 1 YEAR ☐ BILL ME LATER

☐ If you are renewing your present subscription check here and attach your address label.

Name _____

Please print or typewrite

Address ☐ Business _____

☐ Home

City, State, ZIP _____

Railroad or firm _____

Department _____

Job or title _____

You also need one of these specialized monthlies:

	1 yr.	2 yrs.
☐ RAILWAY LOCOMOTIVES & CARS	☐ $4	☐ $6
☐ RAILWAY TRACK & STRUCTURES	☐ $4	☐ $6
☐ RAILWAY SYSTEM CONTROLS	☐ $4	☐ $6

Above rates apply only to railroad and industrial traffic men in U.S. and possessions, Canada and Mexico. All others 1 yr. $17.

WHO SAYS GOOD IDEAS ARE SCARCE?

Obviously, someone who has never seen a copy of **RAILWAY AGE**. Just count those in this issue. Wouldn't it help your staff, department officers and assistants to read it; and wouldn't they appreciate having their own copies to read at home?

——Use this card to subscribe for yourself or an associate.

——If you order 2 or more subscriptions (please list the names, company, titles, addresses and job responsibility information on a separate sheet) the money-saving two year rate is only $12.00.

Remember—just **one** good idea from **RAILWAY AGE** could pay for reading it the rest of your life!

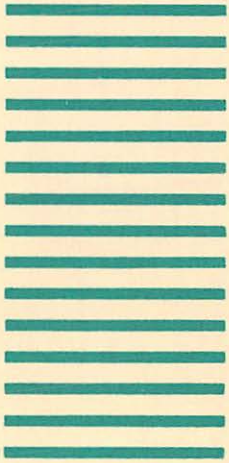
ENCLOSE CHECK WITH ORDER AND GET EXTRA ISSUE AT NO ADDED COST.

BUSINESS REPLY MAIL
NO POSTAGE STAMP NECESSARY IF MAILED IN THE UNITED STATES

FIRST CLASS
PERMIT NO. 153
NEW YORK, N.Y.

POSTAGE WILL BE PAID BY:

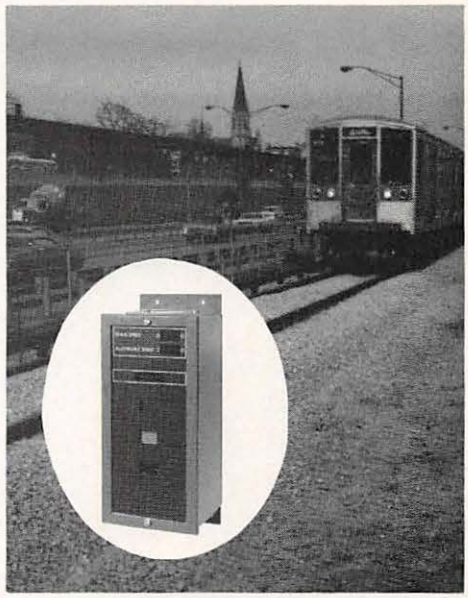
SUBSCRIPTION SERVICE DEPARTMENT
SIMMONS-BOARDMAN PUBLISHING CORPORATION
BOX 530
BRISTOL, CONN. 06010



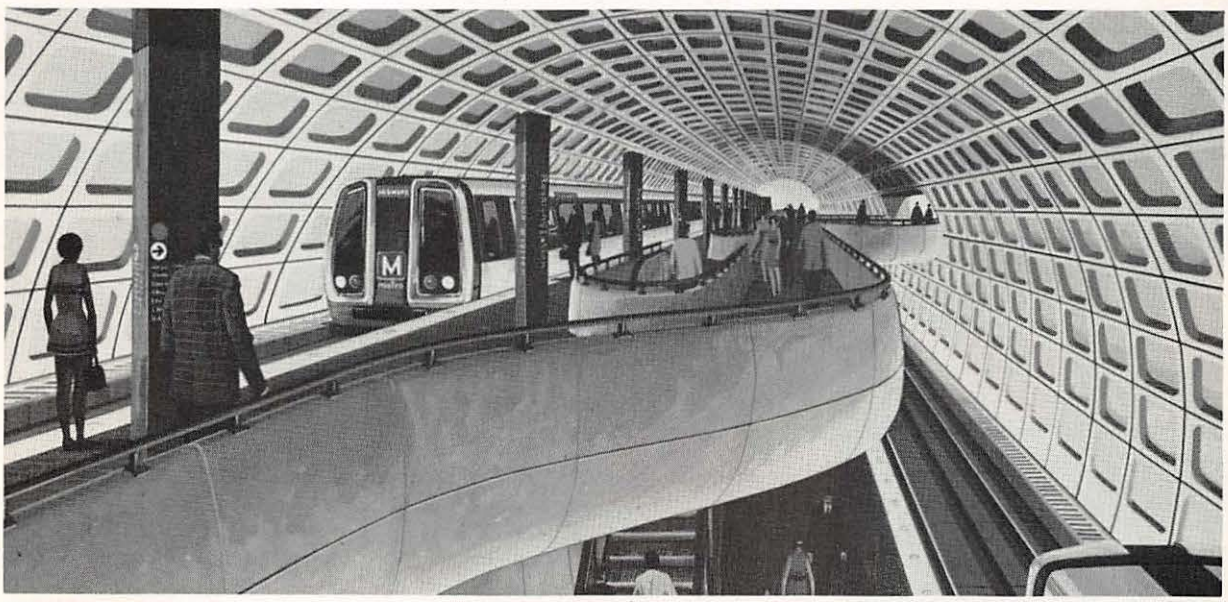
The building block approach to Rapid Transit Controls

The GRS building block approach to rapid transit control systems provides for progressive automation, permits you to meet both today's and tomorrow's needs without costly overbuilding or underbuilding.

- Start with an efficient train separation system combined with onboard cab signals and automatic speed control.
- For limited automation, add central supervisory control and automatic train routing.
- For semiautomation, use an operator to initiate train starts, control door operation, insert and remove cars from the system, handle station announcing, and provide general supervisory override.
- For full automation with no operator, include programmed automatic operation, from starting to door control in a station, and supervisory monitoring and control from the wayside.



Chicago Transit cab signal system includes automatic speed control and high frequency track circuits.



Washington Metro trains will operate under full programmed automation with computer - directed supervisory control from the wayside.

3609

For more details about GRS flexible and efficient rapid transit control systems, write for a copy of Bulletin 207.

GRS
GENERAL RAILWAY SIGNAL
A UNIT OF GENERAL SIGNAL
ROCHESTER, NEW YORK 14602

Circle 3 on Reader Service Card

COME FACE TO FACE WITH TOMORROW

LRC A TRAIN FOR TRAIN PEOPLE

A natural outgrowth from the ever-increasing need for Lightweight, Rapid and Comfortable inter-urban travel, LRC couples the styling, safety and ultra-comfort of a futuristic design.

Far from being a series of independent advances, the LRC is a TOTAL CONCEPT . . . . an integration of no nonsense mechanical engineering and innovative package design.

It features an exclusive Power Banking system, with a down to earth, proven, MLW 251 (2900 hp) diesel power plant and operational systems with which veteran railroaders are familiar.

LRC 28th Floor, One Place Ville Marie,
P.O. Box 6090
Montreal, Quebec, Canada H3C 3H2
Telephone: (514) 877-2681
Telex: 05-25236
Cable: LRCPROGRAM

Circle 4 on Reader Service Card

RAILWAY AGE

January 13, 1975 • Vol. 176 No.1

Editorial and Executive Offices
New York, N.Y. 10013, 350 Broadway
(212) 966-7700
ROBERT G. LEWIS: Publisher
LUTHER S. MILLER: Editor
FRED C. MILES: Executive Editor
Mechanical: Kenneth G. Ellsworth
Signaling & Communications:
Al Klinger
Art Director: Maurice H. Mates
Editorial Assistants:
June Meyer Mattie Garretson
Production Manager: Ruby M. Yee
Manager—Contract Department:
Cathy Whittaker
Editorial Consultant: George Dusenbury

Editorial and Executive Offices
Chicago, Ill. 60602, 29 E. Madison St.
(312) 641-5815

REID KENEDY: Vice President-Sales
GUS WELTY: Senior Editor

Engineering:
Merwin H . Dick R.E. Dove

Editorial Assistant: Wanda Brown

Washington, D.C. 20045
National Press Bldg. (202) 347-1155
Washington Editor: Richard M.M. McConnell

Falmouth, Cornwall, TR11 4RJ, England
P.O. Box 8 (Cable: MISBOARD)
Telephone: Falmouth 313945
International Editors:
John Levett Paul Goldsack

Railway Age, established in 1856, is indexed by the Business Periodicals Index and the Engineering Index Service. Name registered in U.S. Patent Office and Trade Mark Office in Canada.
Published semi-monthly by the Simmons-Boardman Publishing Corporation, 508 Birch St., Bristol, Conn. 06010.
Subscription rates to all railroad, rail rapid transit employees and industrial traffic department employees in the U.S. possessions, Canada and Mexico, $8 one year, $12 two years, all other countries $20 one year. All other subscribers in the U.S. possessions, Canada and Mexico, $17 one year, all other countries $30 one year. All subscriptions payable in advance. Single copies 80c, except special issues.
Address all subscriptions, change of address and correspondence concerning them to Subscription Dept., Railway Age, P.O. Box 530, Bristol, Conn. 06010.
Change of address should reach us three weeks in advance of next issue date. Send old address with new enclosing, if possible, your address label. Post Office will not forward copies unless you provide extra postage.

Member of ABC Audited Paid Circulation RPI Railway Progress Institute

POSTMASTER—SEND FORM 3579 TO P.O. BOX 530, BRISTOL, CONN. 06010.

Printed at the Hughes Printing Co.,34 North Crystal St., East Stroudsburg, Pa. 18301. Second-class postage paid at Bristol, Conn., and at additional mailing offices.

Inside

LUTHER S. MILLER

RIDDLE

It is the fastest-growing segment of the railway supply business. The current backlog of orders is worth well over $1 billion, and is expected to grow by another $750 million in 1975. It is a market that the manufacturers have hungrily waited for and avidly promoted over the years; its prospects have been so dazzling that it has even caught the eye and attracted the start-up capital of the big aerospace firms. Yet, now that it is finally here, some of those companies that have reaped the biggest orders are beginning to wish they didn't have them; some are talking openly about going out of the business. What is it?

What else but the railroad passenger-car business?

If the above is a riddle to the reader, it is not so puzzling to those most involved. They know, or believe they know, what the answer is. The problems—and the proposed solutions—are explored in the opening pages of our 1975 Rail Passenger Review & Outlook issue (p. 16).

Our own conclusion: "While the railroad passenger-car business for years has been comprised of builders looking for a market, it could soon become—barring a turnaround in thinking and practice on the part of the buyers—a market in search of builders."

If that sounds unduly alarmist, remember what happened to St. Louis Car; and to the powered-car lines of the Budd Co. The buyers don't have *them* to kick around any more.

ELSEWHERE ON THE PASSENGER FRONT

While we chose to concentrate in this issue on the passenger-car marketplace—because what is happening there demonstrates both the renewed vitality of train travel and some of the problems that could sap this vitality—there were numerous other developments in 1974 worthy of mention.

The two biggest rail-transit stories of the year came out of Oakland/San Francisco, where the BART system finally went into full operation, and Washington, where President Ford spoiled his do-nothing image by putting his considerable personal prestige and power behind a successful effort to steer a six-year, $11.8-billion transit-aid bill through the rocks and shallows of a divided Congress. Both of these were, however, success stories only in a qualified sense.

Late in 1974, BART still didn't have a permanent general manager (Bill Stokes having been run out of town by a cabal of know-nothings), and with only about half of its fleet of Rohr cars in running order at any given time (suggesting that all of the carbuilders' problems are not financial: Rohr *did* have an escalator clause), ridership on this "showcase" system was still averaging only about 125,000 a day, far below projections.

As for the National Mass Transportation Assistance Act of 1974, it did provide nearly $4 billion which can be used, over the six-year life of the Act, to help pay for operating deficits and thus keep fares down; but the price for fare support may turn out to have been high. There was no new capital money in the Act, on a per-year basis, and old levels of funding in the immediate future will go just about half as far as they used to.

There, was on the whole, better news for Amtrak, whose recent past and probable future are another story (p. 27).

Trouble Shooter's Guide

Whether you're planning a rapid transit system or already operating one, you should know how Whiting engineered inspection and repair systems can help you prevent trouble.

Whiting systems include equipment for hoisting, wheel spinning, exterior washing, plus moving, retarding and holding cars and trains. All equipment is engineered to your specific requirements — and all backed by Whiting's reputation for dependable, service-tested transportation maintenance systems.

It's all described in our new rapid transit "Trouble Shooter's Guide" which shows Whiting systems at work and tells how they can help you. Send for your copy.

RAILROAD MAINTENANCE SYSTEMS ENGINEERING

WHITING CORPORATION

HARVEY, ILLINOIS 60426 U.S.A.

Circle 5 on Reader Service Card

RAILWAY AGE

JANUARY 13, 1975

FEATURES

COVER
Budd Co. photo shows Burlington Northern gallery cars (part of an order for 25 placed by Chicago's West Suburban Mass Transit District) under construction.

MOVING PEOPLE: Review and outlook

Passenger-car business is booming, but where are the profits? ..... p. 16
UMTA studies escalator clauses and progress payments ..... p. 17
The new cars: A picture story ..... p. 22
Amtrak: "Good news, indeed, for the American traveler" ..... p. 27
The market at a glance ..... p. 28
Essay: Keeping the cities alive ..... p. 30

•

Concrete-tie test on Santa Fe: "Best of its kind" ..... p. 32

NEWS

Northtown: It's working ..... p. 8
CN tests slave locomotive units ..... p. 8
Portec plans acquisition of RMC ..... p. 8
RRB clarifies '74 act's provision ..... p. 8
NA Car gets credit expansion ..... p. 8
CN installing 121,000 concrete ties ..... p. 8
UP wants more time on RI ..... p. 8
Steel demand seen strong through 1975 ..... p. 8
1974: "A good year for the railroads" ..... p. 10
Amtrak gets first of 26 new electrics ..... p. 10
NW will increase spending by 36% ..... p. 12
Southern will keep Piedmont, Crescent ..... p. 14
150 apply for top BART job ..... p. 38
Amtrak is still looking ..... p. 38
N.Y. plans noise-reduction program ..... p. 38
CTA operating budget up 13% ..... p. 38
N.J. ponders West Shore service ..... p. 38
CN increases passenger fares ..... p. 38

OPINION

INSIDE — Riddle ..... p. 5
LINES ON LABOR — And hello, 1975 ..... p. 12
VIEWPOINT — Going into '75: All the trends aren't bad ..... p. 44
WATCHING WASHINGTON — ICC comes out of the closet ..... p. 14

DEPARTMENTS

Advertising Sales Offices ..... p. 42
Carloadings ..... p. 37
Letters ..... p. 34
Market Outlook ..... p. 37
Piggyback Loadings ..... p. 37
Products Report ..... p. 40
75 Years Ago ..... p. 35
Suppliers ..... p. 41
Transit ..... p. 41

Short and Significant

NORTHTOWN: IT'S WORKING

Burlington Northern's $40-million Northtown Yard, scheduled for completion this year, is already in partial operation, with (as of December) 45 of 63 class tracks in use and 15 trains a day being humped. The Twin-Cities-area facility, largest yard on the system, was about 80% completed at yearend, and BN is happy with the way things are going. Says Regional Vice President W.R. Allen: "Already, we are realizing new efficiencies—and, naturally, we're pleased that construction is on schedule."

CN TESTS SLAVE LOCOMOTIVE UNITS

Canadian National and Canadian Pacific have just furnished another example of how to be cooperative though competitive: CP Rail loaned CN a slave locomotive unit and control unit, and CN has now completed tests of the equipment between Jasper and Kamloops. CP Rail uses slave units primarily as booster power on mainline grades west of Calgary, but CN has a different approach: Its grades are less severe, and so CN is looking at slaves in terms of "possible benefits. . .in improving train-handling and in lessening the impact of today's heavy freight trains, many over 10,000 tons, on the existing track structure." C.F. Armstrong, Mountain Region vice president, said the tests "may lead to more extensive evaluation of possible performance benefits on the Mountain Region and elsewhere."

PORTEC PLANS ACQUISITION OF RMC

Portec and Railway Maintenance Corp. have reached an agreement in principle under which Portec would acquire RMC in exchange for shares of convertible preferred stock of Portec. Shareholders of RMC, a closely-held company, must approve the agreement. Chicago-based Portec is estimating its 1974 sales at $110 million (with earnings touching a record high of approximately $4 per share). RMC sales for '74 are estimated at about $6 million.

RRB CLARIFIES '74 ACT'S PROVISIONS

With the extremely-complicated Railroad Retirement Act of 1974 now in effect, the Railroad Retirement Board continues to try to develop answers to the many questions that are inevitably coming up. RRB's latest effort: A 20-page pamphlet which outlines major provisions of the Act, cites examples of the financial aspects of various retirement situations, and attempts to answer some of the most-asked questions. Copies are available from the Board, Chicago, Ill. 60611. Meanwhile, the labor member of RRB, Neil P. Speirs, has been appointed to a second five-year term by President Ford and confirmed by the Senate. Speirs, who joined the Board in 1969, had been president of the Switchmen's Union North America and later assistant president of the United Transportation Union.

NA CAR GETS CREDIT EXPANSION

North American Car and a group of seven banks have come to an agreement on an expanded $110-million loan. This actually represents a $40-million expansion in North American's line of credit and is designed "to meet the company's growing capital needs for intermediate funding. Proceeds will be used primarily to finance purchase of railcars prior to long-term financing under equipment trusts." North American originally negotiated the line of credit in 1966.

CN INSTALLING 121,000 CONCRETE TIES

As of Jan. 1, Canadian National had completed all but 11 miles of roadbed in a program to double track its main line over 45 miles between Winnipeg and Portage la Prairie in Manitoba. Concrete ties will be installed through the winter months at the rate of 2,400 a week. This is the first major installation of concrete ties on CN's 23,000-mile network, and a total of 121,000 will be required. The laying of 132-pound, continuous welded rail will begin in the spring; the first 18-mile section of new line will be open to traffic in July, and the entire double track line will be in operation in 1976.

UP WANTS MORE TIME ON RI

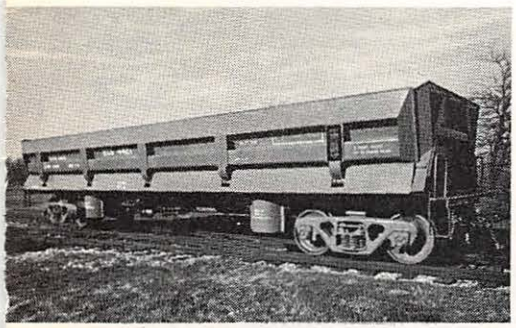
The ICC ruling in the Rock Island merger case is a complex one—and Union Pacific, for one, wants more time to study the situation before filing further petitions. UP is asking the Commission for a 90-day delay, until April 2, on the deadline for filing for reconsideration. ICC issued a preliminary report in November and followed up early in December with complete findings (RA, Nov. 25, 1974, p. 10).

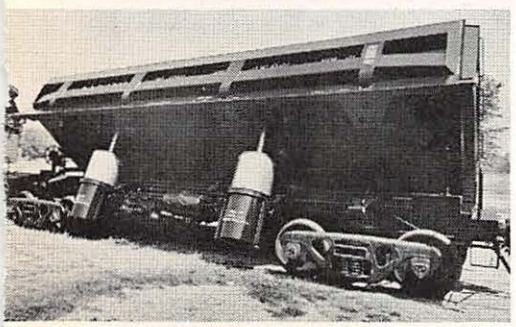
STEEL DEMAND SEEN STRONG THROUGH 1975

The steel industry will continue to operate at near capacity during the first quarter of 1975 and will produce at least 145 million tons of raw steel by the end of the year. That forecast—by Rev. W.T. Hogan, S.J., professor of economics at Fordham University and a steel industry economist—appears in an upcoming issue of the Babcock & Wilcox Tubular Products Newsletter. Father Hogan says the few soft spots will not affect steel's long-term capital expansion plans.

R. R. BANK WIDENING

THE FAST DIFCO WAY





Bank widening jobs, like the one pictured above, are an essential part of most lines' maintenance of way operations. That's why today, more and more modern railroads depend on the heavy duty performance and economy of all-welded DIFCO Air Side Dump Cars*. DIFCO's fast, clean dumping cycle and advanced "extra capacity" design features help speed up the job, saving important time and labor costs and freeing valuable equipment.

Built to accommodate maintenance of way programs from ditching to rip-rapping, or wherever heavy haulage capacity is important, DIFCO Dump Cars raise to a self-cleaning fifty degree angle in only eight seconds for fast, accurate dumping to either side of the track. And DIFCO's patented down-folding door design assures maximum load cast—keeps tracks and ballast area clear.

But most important, DIFCO Cars are built to take the toughest shocks and heaviest loads—and keep coming back for more, in capacities of 40, 50 and 60 cubic yards! Wire, write or call your DIFCO representative today. He'll be glad to give you full details on how to put DIFCO efficiency to work for you.

*Patented

Remote Controlled DIFCO Loco Trains • DIFCO Payload Locos • Differential Air Dump Cars • "Axless" Truck Mine Cars • Locomotives • Rotary Car Dumpers • Wagon Trains

DIFCO, INC., FINDLAY, OHIO 45840 • PHONE 419-422-0525

Circle 6 on Reader Service Card

D742

1974: "A good year for the railroads"

For most of 1974, inflation was the nation's No. 1 headache—and railroads were not spared. Diesel fuel prices rose 106% during the year, adding $584 million to the cost of running trains. Increased cost of materials—crossties, up 45%; rail, 42%; car wheels, 62%; sheet steel, 47%—added another $978 million to expenses. The AAR estimated that a freight car that cost $18,000 a year ago would cost $27,000 in 1975. And the over-all effect of inflation, the AAR said, would mean that railroads will need some 35% more in capital funds in 1975 if they are to continue capital improvements at the 1974 rate. Late in 1974, a deepening national recession began to show in a traffic downturn.

Nonetheless, AAR President Stephen Ailes was able to describe 1974 as "a good year for the railroads." And with sound reasons. Some of them:

—Despite a month-long coal strike, the railroads appear to have established a third consecutive all-time record for ton-miles handled. The total is expected to be slightly above 1973's 851.8 billion. "It also appears," said the AAR, "that, with truck tonnage declining, the railroads have increased their share of intercity frieght traffic for the second consecutive year."

—There is no question about revenues: they did reach an all-time high in 1974. Based on late-year projections, the AAR was estimating revenues in the neighborhood of $17 billion, exceeding last year's $14.8 billion by 15%. This was due principally to freight-rate increases. A rate hike of 4% was approved by the ICC effective last March 9 to help offset rising costs; additional increases of up to 10% went into effect June 20 (with the stipulation from the ICC that most of the additional revenues be applied toward catching up on deferred capital and maintenance programs).

—Despite record expenses, of around $16 million, the railroads in 1974 were able to report a substantial increase in net income, with the result that return on net investment rose to around 4%, the best since 1955. (While this was good, it was not, the AAR pointed out, good enough: "Earnings will still be well below levels deemed adequate to enable the industry to meet its capital improvement needs." Present estimates of an "adequate" rate of return range from 10% to 15%.)

—For the first time since 1951, employment rose: the 1974 average of 525,000 employees was nearly 5,000 higher than in the previous year.

—The tally of new freight cars ordered in 1974 won't be completed for two or three more weeks, but the AAR says the total "will approach the level of last year," when over 106,000 new cars were ordered—highest since 1955. The AAR noted that while the level of over-all orders continued at about the previous year's pace—8,700 cars a month, on the average—"there was a shift in emphasis from grain-carrying covered hoppers. . .to open-top hoppers for coal. On Nov. 1, there was a backlog of 94,410 cars of all types on order—up from 67,965 on Jan. 1. A total of 25,832 of these orders were for coal cars; 19,408 for box cars; and 17,273 for covered hoppers.") Car installations were also up: 55,892 in the first 10 months of 1974, vs 48,033 during the corresponding 1973 period; and installations would have been higher "were it not for chronic material and parts shortages that began to plague carbuilders."

—The car-supply situation was the best since 1972. After the first four months of the year, there were actually surpluses of box cars, covered hoppers and flat cars. The remaining shortages were in coal cars and in gondola cars for hauling steel products, scrap and aggregates. Car supply was helped not only by stepped-up orders and deliveries, but also by improved utilization: during the first three quarters of 1974, there was an improvement of 5.2% in car utilization, and this came on top of a 20% increase achieved in the two previous years. However, for the latter months of 1974 a decline in utilization was expected, due to the coal strike and the business slump.

As for what the AAR calls "off-track" developments, there was major activity in the judicial and legislative areas. Of perhaps prime importance, the Supreme Court upheld the constitutionality of the Northeast Rail Reorganization Act of 1974. A close second was enactment by Congress—over President Ford's veto—of the Railroad Retirement Act of 1973, "accomplishing a long overdue reform of the railroad retirement system and eliminating the threat of impending bankruptcy." The big disappointment was the failure of Congress to approve the long-pending Surface Transportation Act which, among other things, would have provided up to $2 billion in Government guarantees of loans for rolling stock acquisitions and right-of-way improvements.

GE's E60CP is Northeast Corridor's first new electric in 30 years.

Amtrak gets first of 26 new electrics

Late in 1974, General Electric began delivery of the first of 26 new high-horsepower electric locomotives to Amtrak. The E60CP units, which are capable of speeds to 120 mph with up to 10,000 hp available for short-time acceleration, are the first new electric passenger locomotives in the Northeast Corridor in over 30 years. They will be operated primarily between New York City and Washington, D.C., though they will also see service between Washington and New Haven, Conn. The 71-ft-long units are based on the design of three Black Mesa & Lake Powell E60C locomotives which have been in unit coal train operation for over a year at the Navajo Generating Plant in Page, Ariz.

Any time you need car parts, call one of these numbers.

201-842-3737
R.A. Corley,
Little Silver, N.J.

215-563-5966
Frank W. Hughes,
Philadelphia, Pa.

412-366-1840
Ron M. Giallonardo,
Pittsburgh, Pa.

703-536-5135
Harvey R. Lambert,
McLean, Va.

312-398-7951
R.J. Hughes,
Chicago, Ill.

318-221-2448
Earl Zapp
Shreveport, La.

612-227-6511
John I. Larson,
St. Paul, Minn.

402-391-1410
Joe F. Lysaught,
Omaha, Neb.

314-724-7850
William J. Xander,
ACF-St. Charles, Mo.

313-365-5880
John J. Kobiela,
Detroit, Mich.

212-986-8600
Bob Alexander,
ACF-New York, N.Y.

415-362-1143
Rudy DiCarlo
ACF-San Francisco, Ca.

These are the ACF sales representatives who can save you time, effort and frequently money when you need freight car parts.

acf Amcar Division ACF Industries Incorporated, Amcar Division, 110 Clark Street, St. Charles, Missouri 63301

Circle 7 on Reader Service Card

Lines on Labor

GUS WELTY

AND HELLO, 1975...

Last year was not one of your all-time great years for collective bargaining. For instance, through the first nine months of 1974, 4,780 work stoppages took place. Final figures on '74 won't be available for a while, and a straight-line projection of the nine-month figures would certainly be somewhat inaccurate. But, if you were to do the straight-line arithmetic, you would come up with a full-year figure of well over 6,300 tieups. And anything over 5,716 work stoppages would make '74 the worst strike year since the end of World War II. How about the number of workers involved? Well, through nine months, the 1974 total was more than 2.2 million—more than in all of 1972 and within a few thousand of the 1973 total. Man-days lost? It's staggering—more than 38 million, January through September. In contrast, the 12-month figures for both '72 and '73 were under 28 million. Of course, the available '74 statistics don't include the coal strike. And when that's added in, the conclusion will be inescapable: 1974 was trouble.

WHAT'S THE WORD FOR '75? MORE TROUBLE—OR LESS?

On the surface, 1975 looks like a better year—if only because contracts involving fewer employees will expire or be subject to reopening. Last year, negotiations involved more than 5.2 million workers; this year, the total is only about 2.5 million. But—and it's a big "but"—the affected unions can be expected to do their utmost to catch up with inflation; and, '75 (at this point, at least) will be the first control-free year since 1970. Too, some of the unions in bargaining in '75 are unions with a history of (1) exacting substantial settlements and/or (2) getting those settlements not before but after a strike.

THE LINE-UP FOR THE YEAR—AND WHAT IT MAY MEAN

First up is the petroleum-refining industry—an industry generally regarded as relatively strike-proof because of automation but an industry in which strikes did take place two years ago. In view of the energy situation, nobody needs to be reminded of the importance of the refiners—or of the need for continuity in its operations. Next up—and stretching over most of the year—will be expirations in the fragmented construction industry. Negotiations will cover about half of the contracts and half of the 1.6 million construction workers. In the past, construction unions have been tough—and they have wrung settlements describable only as "fat" from employers. Then, this year will also see bargaining in the airline industry, and on the West Coast docks. And in the U.S. Postal Service, where four unions and more than 600,000 employees are involved. Five years ago, postal workers struck for a week, Federal troops were sent in to keep the mail moving, and the act creating USPS was a more-or-less direct result of the walkout (and yes, while mail service is bad, no mail service is probably worse). So, how do you size-up 1975? Obviously, the numbers indicate that it won't be a record year for management/labor strife. But many of the industries involved are critical ones. And unless there is some sign of a break in the strange recessionary/inflationary economy, labor will not be easy to deal with. Ergo, 1975: Better than '74—but that's not saying much.

NW will increase spending by 36%

Norfolk & Western plans to invest $105 million in capital improvements in 1975, an increase of about 36% over the $77.2 million spent in 1974.

Rising coal traffic is partly responsible for the sharply stepped-up capital program. NW has ordered 2,000 100-ton coal hoppers from its Roanoke shops, and about 1,300 of the cars are to be completed by the end of 1975.

President John Fishwick noted: "The NW has received during recent months over 100 applications for the development of rail sidings at coal mine sites. Normally, the railroad receives about a dozen applications a year." He added that NW "expects to construct new installations and rearrange many existing ones at the Appalachian coal mines it serves."

NW also plans to purchase 66 locomotives, 500 box cars, 100 flatcars, 300 coil steel cars, 26 fully enclosed tri-level rack cars, and 108 bi-level racks. In addition, 100 cabooses will be ordered during 1975 for delivery during the latter half of 1976.

Track plans for 1975 call for installation of 300 miles of continuous welded rail, 85 miles of jointed rail, 180 miles of continuous welded rail relay and 64 miles of jointed rail relay. NW will clean and surface more than 2,300 miles of track, install 1.4 million tons of ballast and lay more than 1 million ties. A yard rehabiliation program that began last summer will be continued.

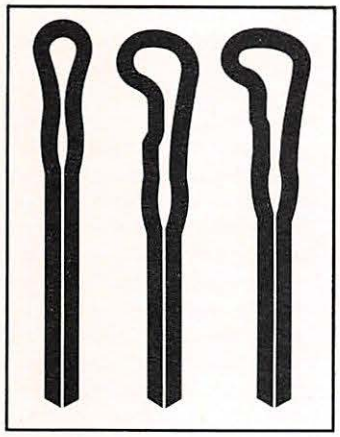
New car repair facilities will be built at Bluefield and Elmore, W. Va., and Chicago, and a locomotive servicing area will be constructed at Weller, Va. An existing car repair facility at Kansas City will be relocated. Dock improvements are programmed at Detroit, Mich., Sandusky and Huron, Ohio.

In addition to new projects to be initiated in 1975, Fishwick noted that NW in 1975 "will realize the benefits of several improvements now nearing completion or scheduled to become operational before 1976."

These include a $2.2-million computer center now under construction at Roanoke; and a $13-million microwave system that will become operational late in 1975 between NW's Roanoke headquarters and its regional offices in Cleveland. One year later the 2,400-mile network will become fully operational.

Meanwhile, Illinois Central Gulf Industries has announced a $153-million capital program for 1975, of which $91 million will be allocated for transportation improvements. The comparable figures in 1974 were $136 million and something over $100 million.

Bethlehem Lock Spikes help retain rail gage on curves

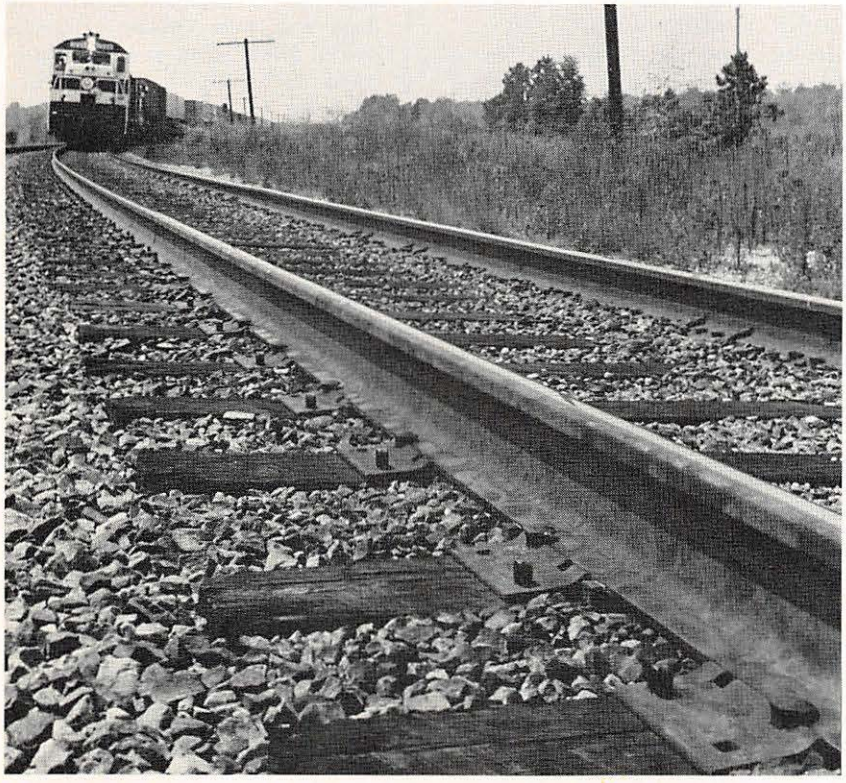


Holding rail gage on curves can be a problem—especially on the curves of high tonnage track and where high capacity cars operate. Tests have shown that gage-widening, while especially prevalent on curves, can also occur on tangent track.

Bethlehem Lock Spikes are one of the most effective fasteners for maintaining true line and gage. Lock spikes use spring compression to hold plates firmly in place, restricting them from both horizontal and vertical movement. Gage is held, and tie plate cutting is minimized if not overcome.

The effective use of lock spikes eliminates the need for frequent regaging. They are quickly and easily driven by the regular track workmen.

Bethlehem stocks a full line of lock spikes in three designs: tie-plate, gage, and rail. We'd be happy to discuss these maintenance-reducing fasteners with you. Just call the nearest Bethlehem sales office, or write to us direct at Bethlehem, PA 18016



The Seaboard Coastline has found Bethlehem Lock Spikes are effective fasteners for maintaining true line and gage. Here at Jacksonville, Florida, Bethlehem lock spikes hold the gage of a heavy-duty curve.

Bethlehem BETHLEHEM STEEL

Watching Washington

R.M.M. McCONNELL

ICC COMES OUT OF THE CLOSET

The Interstate Commerce Commission—which usually carries on its work with a routine that robs it of publicity—wrapped up 1974 with a series of headline-grabbing moves.

Defending its requirement that 70% of the revenue generated by a recent 10% across-the-board rail freight rate rise be spent on improved maintenance, the ICC charged that the Chessie System (as well as two other profitable railroads) was deferring maintenance unnecessarily. According to Commission data, deferred maintenance costs for rails on the C&O has climbed to $44.4 million, with the B&O's deferred rail maintenance figure now at $36 million. In addition, the ICC claims, the Chessie System's tie replacement rate assumes a tie life span of 59 years, while the industry norm is 35 years. Impact of deferred maintenance emerges from Chessie derailment statistics that show 87 derailments in 1964 and 240 in 1973.

The deferred maintenance data emerged because the Chessie System has taken the ICC to court, claiming that the Commission has no power to rule on how rail revenues must be spent. The case is expected to go to the Supreme Court.

In another rate dispute that can be expected to go on for a while, the ICC rejected railroad plans to charge increased rates for the shipment of fresh fruits and vegetables. The Commission's unanimous ruling to reject the rate rise came hours before the new rates were to take effect, following a seven-month study by the ICC. According to the Commission, the increased rates would have caused excessive hardship to growers; removed the railroads from consideration as carriers in many cases; and in any event were based on an accounting procedure that has never been accepted by the ICC as justification for a change in freight rates.

AND FOR PASSENGERS AND BRANCHES

While working on freight-related problems, the ICC also took time to unanimously order an investigation into what rules might be needed to improve passenger-train service. Current rules—adopted in December 1973—have occasionally been waived, but requests for permanent changes in the rules have apparently inspired ICC to take a close look at how passenger-service quality is holding up. Amtrak has two changes pending—ending food service between midnight and 6 a.m. and cutting back on the number of lounge cars—and might ask for two more rule changes: a requirement that reservations be paid for and picked up 24 hours before train departure (rather than the 30 minutes allowed now), and modification of reserved seat requirements.

And in ICC's Rail Services Planning Office, the public counsel has criticized the U.S. Railway Association's apparent emphasis on profitability as the primary criterion for determining if a branch rail line should be abandoned. In a letter to USRA board chairman Authur Lewis, the RSPO counsel said that USRA is violating its charter as outlined in the Regional Rail Reorganization Act by focusing on the profitability question. Instead, the letter added, USRA should be including the profitability question along with social, environmental, and long-term economic effects of abandonment.

Southern will keep Piedmont, Crescent

Southern President W. Graham Claytor, Jr., has announced that the system's two principal passenger trains—the "Southern Crescent" and the "Piedmont"—will be continued, with "relatively minor" modifications. The system's two remaining passenger trains, which accounted for less than 2% of volume and revenues in 1974, will be discontinued. These are the thrice-weekly Salisbury-Asheville, N.C., train and a Washington-Lynchburg daily train.

Claytor described Southern's plans for its two big trains this way: "Southern's most important and premier train, the Southern Crescent, which provides sleeping and coach accommodations between Washington and New Orleans, with through sleeping cars between New York and Los Angeles through Amtrak connecting services, will definitely be continued. This service is presently operated on a daily basis between Washington and Birmingham and a tri-weekly basis between Birmingham and New Orleans. Patronage between Washington and Atlanta is sufficient to justify a daily service, but between Atlanta and Birmingham this is not the case; in spite of the gasoline shortage, an average of less than 31 passengers per trip were carried on the entire train between Atlanta and Birmingham on the four days each week when the train did not operate beyond Birmingham. It is accordingly proposed to operate the Southern Crescent south of Atlanta on a tri-weekly basis and north of Atlanta on a daily basis.

"Southern's second train is the Piedmont, which currently operates on a daily basis between Atlanta and Washington. Because of the distance traveled, this required inconvenient departure and arrival times at Atlanta and similar departure and arrival times at Washington that make connections to the north relatively inconvenient. Experience over the last several years has shown that the utilization of this train south of Charlotte has been extremely light. The average number of passengers carried on the entire train south of Charlotte in the first nine months of 1974 was only 16.2 per trip and 85% of the passenger miles attributed to the train have occurred between Charlotte and Washington. By discontinuing the train south of Charlotte, therefore, the schedules can be changed so as to provide far better connections at Washington with New York and intermediate points as well as more convenient arrival and departure times for the Virginia and North Carolina cities for which this train provides a real service."

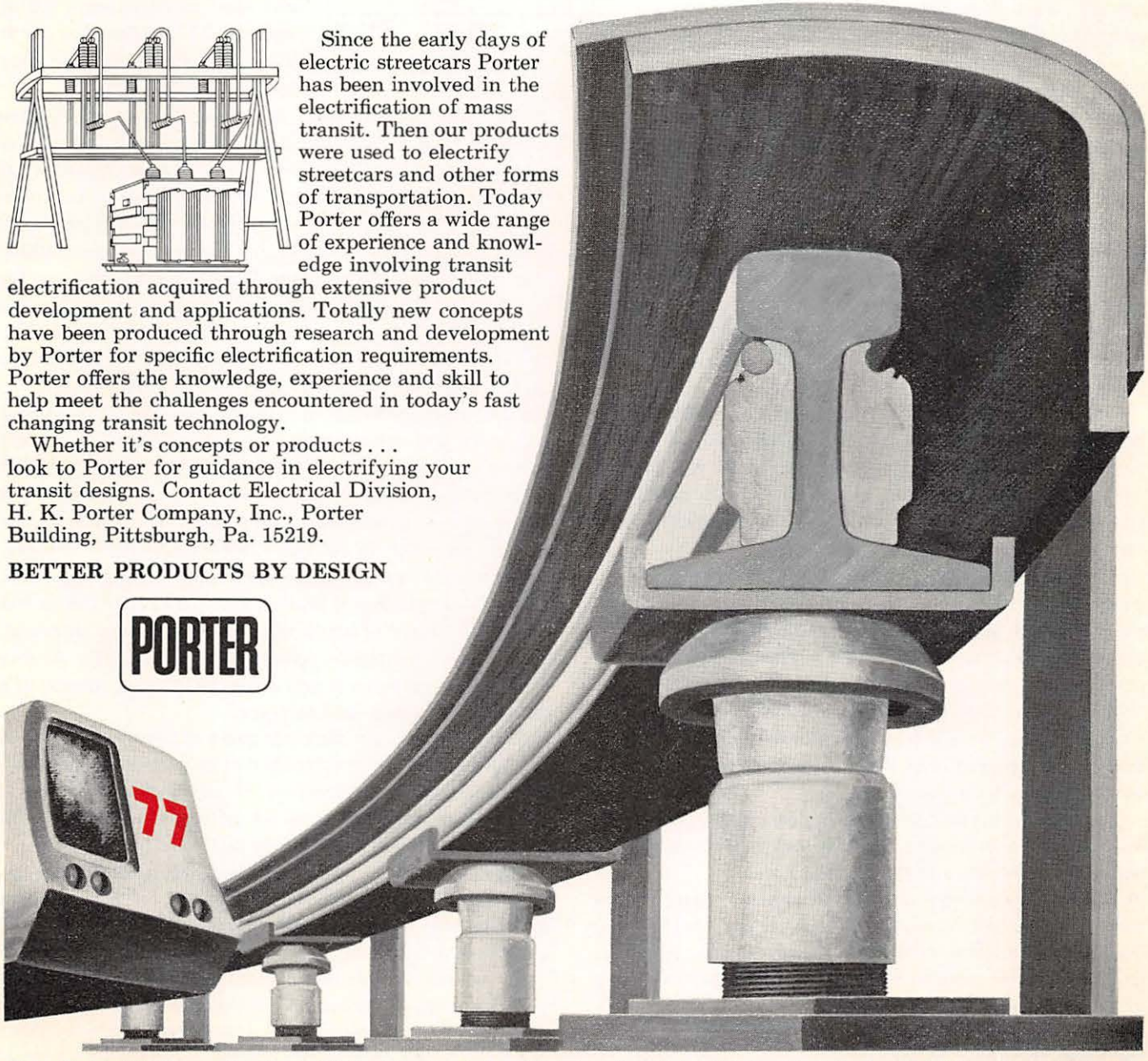
Porter powers transit

Since the early days of electric streetcars Porter has been involved in the electrification of mass transit. Then our products were used to electrify streetcars and other forms of transportation. Today Porter offers a wide range of experience and knowledge involving transit electrification acquired through extensive product development and applications. Totally new concepts have been produced through research and development by Porter for specific electrification requirements. Porter offers the knowledge, experience and skill to help meet the challenges encountered in today's fast changing transit technology.

Whether it's concepts or products . . . look to Porter for guidance in electrifying your transit designs. Contact Electrical Division, H. K. Porter Company, Inc., Porter Building, Pittsburgh, Pa. 15219.

BETTER PRODUCTS BY DESIGN

PORTER

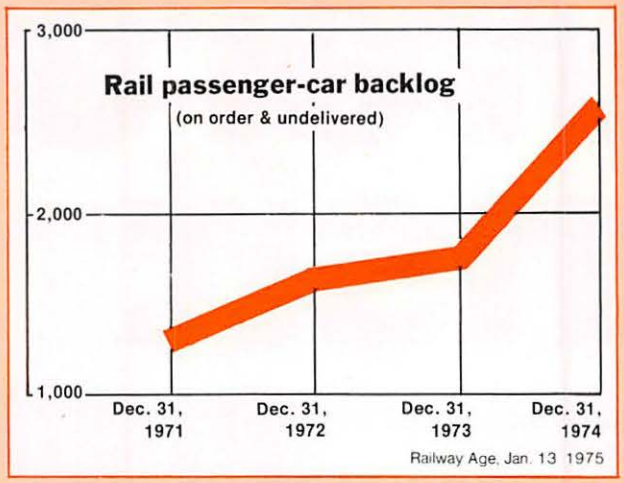


Porter Electrical Division supplies Electric Utilities, Transit and General Industry with Switches, Isolating Circuit Breakers, Substations, Bus and Metalclad Products, Cable Accessories, Pole, Pad and Station Type Transformers, Current Collecting Systems and Components, Metal Trim, Fans, Blowers and Special Motors.

Circle 20 on Reader Service Card

For passenger-car builders:

Business is booming —but where are the profits?



Everybody—well, everybody except the road gang—has been talking for years about the "coming" renaissance of the passenger train. For most of those years, the renaissance has been just that: "coming." Now, at the three-quarters mark of the 20th century, there is mounting evidence that it may be here.

Look at ridership trends: While highway travel in 1974 was experiencing its first downturn since World War II (off 3%), Amtrak patronage was going the other way (up 21%). Ridership on public transit systems, including rail rapid and commuter lines, was up over 7%.

Even more to the point, in terms of what may be happening to train travel in the next few years, is the state of the railroad passenger-car marketplace. Just a few years ago, orders for passenger-car equipment were reduced to such a trickle that the industry's statisticians stopped counting them in order to concentrate entirely on freight cars. Now all that has changed.

On Dec. 31, 1974, railroad passenger-car builders had a backlog of 2,667 cars on order and undelivered, vs 1,775 a year ago and 1,290 three years ago. At today's going prices, around $500,000 per car, the value of this backlog is equivalent to that of between 50,000 and 60,000 freight cars.

The end is not in sight. The carbuyers told Railway Age in a recent survey (see pp. 28-29) that they will place orders for an additional 1,689 cars in 1975, and on top of that they will order over 5,000 more cars in the five years following. So the passenger-car market, often described in recent years as "moribund," is suddenly hot—so hot that half a dozen or so foreign builders (among them, Mitsubishi of Japan, ASEA of Sweden, Messerschmitt of West Germany, Fiat of Italy) are starting to look for a piece of it.

So much for the best of times. The paradoxical fact is that for most of the carbuilders, this long-looked-for passenger-car boom is now turning into the worst of times.

● **Builders are doing more but enjoying it less.** It may come as a surprise to outsiders—though certainly not to those close to the industry—that two or three of the carbuilders who have a large share of current orders, and can reasonably expect thousands of additional orders, are seriously considering going out of the business. Far from "getting rich" on the boom they have so long been waiting for, they are, in many cases, in deep trouble.

Inflation, which has far outstripped projections that were current when many existing contracts were signed, is a root cause. With a single exception—Rohr's BART-car order—passenger-car contracts have no escalator clauses. (This means that, in one case, cars that were bid at less than $300,000 will be worth more like $500,000 when they are finally delivered.)

● **What the builders need.** In future, escalator clauses are going to be a must before any carbuilder will talk to any carbuyer. The carbuilders also need "progress payments" at an accelerated rate. In a couple of cases, these have now been negotiated. The whole question, in fact, of escalator clauses and progress payments is one that has been getting considerable attention recently at the Federal level—where the big decisions must be made since Federal funds pay for around two-thirds of the cost of most passenger equipment. (For UMTA Administrator Frank C. Herringer's views on these and other difficulties facing carbuilders, see facing page.)

Another problem which builders have complained about for years—and which they say has worsened with each passing year—is that of new and increasingly complex specifications which the buyers and their consultants write into each new generation of cars. While the builders know that it's too much to ask San Francisco riders, for example, to accept the comparatively austere car which New York City straphangers would find luxurious, they nonetheless feel that some degree of standardization would help all round. They may accomplish something here in '75: Atlanta reportedly is ready to accept a slightly modified version of a car already designed—and debugged.

Other changes are probably going to have to be made in competitive bidding practices and in long-standing terms-conditions-and-warranty-provisions of carbuilding contracts if North American purchasers are going to be assured of a continued supply of domestically-built cars.

"We want to stay in this business; there is plenty of it and the potential is tremendous," the head of one big carbuilder told Railway Age. "But we can stay in it only if the environment is such that we can make a reasonable profit."

In summary: While the railroad passenger-car business for years has been comprised of builders looking for a market, it could soon become—barring a turnaround in thinking and practice on the part of the buyers—a market in search of builders.

UMTA studies escalator clauses and progress payments, but. . .

Frank C. Herringer, head of the Urban Mass Transportation Administration, recently talked with Railway Age Publisher Robert G. Lewis and Editor Luther S. Miller about the difficulties facing passenger-car builders. Excerpts from the exchange follow.

RAILWAY AGE: You are familiar with the problems transit carbuilders are now facing. Some are losing money. They say they may be forced out of the carbuilding business. What do you feel could or should be done to relieve some of these problems?

HERRINGER: We're looking at the possibility of escalator clauses, to allow the price of transit cars to fluctuate based on the actual price of materials or labor. I think if we can work out a way within UMTA's procedures to adopt such a policy, we'll do it. That will ease a lot of the pressure on the carbuilders, and on the grantees—the purchasers—too.

RAILWAY AGE: How about progress payments to the builders?

HERRINGER: We are flexible on that. We are willing to do just about anything that the grantee can do under his own laws as long as we are paying for material that has already been purchased. We can't advance money, but we can pay a manufacturer for work in process, and in a couple of cases we've done just that—in the General Electric contract for the New Haven cars, and in the Pullman contract for the New York subway cars. But when we do something like that, there has to be quid pro quo—there has to be a return from the manufacturer. Now, in the New York case it turns out to be nine extra cars in return for the accelerated payments. We calculated out what the value of that was to Pullman and Pullman agreed to provide that value in essentially extra cars.

RAILWAY AGE: What has brought on this problem—is it simply inflation, or are there other factors?

HERRINGER: Inflation is part of it, but I still think part of the problem is low bidding. Everybody has been trying to buy into the market. They've made their initial buy now, and perhaps we are now seeing some realistic prices.

RAILWAY AGE: Do you think these cars may be unnecessarily complex, with new specs written into new cars for reasons that may have little to do with sound engineering?

". . .I still think part of the problem is low bidding. Everybody has been trying to buy into the market."

UMTA Administrator Herringer

HERRINGER: They are complex, but I would not go so far as to say unnecessarily. It's a complex business.

RAILWAY AGE: Why, for example, is the R-46 so different from the R-44, which was itself sufficiently complex?

HERRINGER: There's always a tendency to try to get a better car, to improve on the previous one. I can't fault the Transit Authority for trying to get a better car. I think their constituency would question them if they just kept buying the same old car.

RAILWAY AGE: From your long experience with consultants, do you find any merit in the charge that some of them may be writing in new specs just to justify their existence?

HERRINGER: I don't think so. If there is a fault, it lies as much with the operators as with the consultants. Everybody wants something slightly different.

Now we're concerned about standardization in the rail industry, and we're trying to get Washington and Baltimore and Atlanta to come together and try to decide on at least a common envelope, and maybe some other commonality in the cars. We're trying to encourage them to standardize. We don't think, though, that we at the Federal level should just say, well, everybody is going to buy just *this* car. I don't think we know enough to do that. But certainly with the new systems we should be able to exert some leadership to encourage the new operators to standardize as much as possible. It saves them money, too.

RAILWAY AGE: Then you think it might make some sense next spring, when the Atlanta cars go out for bids, for Pullman to say, "Let us give you a version of the R-46 we are building for New York," or Rohr to say, "Let us give you a modification of the Washington Metro cars?"

HERRINGER: Sure. I think that would make a lot of sense. The WMATA car is a new car, and so is the R-46, and I think we would ask Atlanta a lot of questions if they came out with something radically different. If they want a two-inch wider car, we're going to want to know why.

RAILWAY AGE: Getting back to the possibility of an escalator clause, would that be tied to some sort of government index?

HERRINGER: Probably some index pertinent to the manufacturing segment of the economy.

RAILWAY AGE: There is, of course, the possibility that none of these solutions are going to come in time, or work at all. And there is increasing talk of the possibility that the way things are now going, we will soon have no carbuilders left in this country, remembering what happened to St. Louis Car, and what happened to Budd, and what seems to be happening to those that remain in the field. Is this a source of concern to you?

HERRINGER: I don't believe that the car manufacturers are going to drop out of the business. It is too good a market, and it's a continuing market, and somebody can make some money on it. There's room for a couple of manufacturers at least, two, three or four, and I don't think that any of the major companies are going to walk away. And

"It's a continuing market. I don't think that any of the major companies are going to walk away"

keep this in mind: the freight-car business and the locomotive business are starting to drop off rather rapidly, and this is causing some people who were scoffing at the transit car business to take another look at it.

RAILWAY AGE: Are you, on balance, satisfied with the National Mass Transportation Assistance Act of 1974?
HERRINGER: Yes, I am. I think it contains all the elements we need for an effective program. We can always argue about whether there's enough money in it or not. I know a lot of people have different viewpoints on that. But in terms of structure, it's a good bill. It gives us all the tools necessary to attack the problem—a capital program, an operating program, an R&D program, a service methods demonstration program, a planning program—there's nothing else you can ask for.

RAILWAY AGE: Whatever happened to UTAP?
HERRINGER: The House Public Works Committee severed the long-term portion of our bill—that is, the last three years, which called for a single-formula program for highway capital, transit capital and transit operating funds. Except for that, what we ended up with, really, looks very close to what we started out with in UTAP. The dollars are different, the formula is different, a number of other things are different, but the basic structure is very similar to UTAP, without that merger of the highway program and the mass transit program.

RAILWAY AGE: Are you satisfied with the compromise that was finally worked out on operating subsidies?
HERRINGER: Yes. As you know, about a third of the total can be used for operating *or* capital. In the first couple of years, it's a little bit low, I think—$300 million this fiscal year and $450 million next year. Most of it, especially in the major cities, will have to go for operating needs, with that magnitude of funding. But as we get into the out-years, we start getting to $700 million and $800 million per year, and at that point some cities will be faced with a real choice between operating and capital, which is how we'd like to see it.

RAILWAY AGE: Do you think that the fares in some cities may really be too low—perhaps for political reasons?
HERRINGER: That's hard to say. The fare decision is really one that has to be worked out locally, and I don't think you can say that a given fare is either too low or too high. It is basically a local political decision. If New York decides for political reasons or social reasons or welfare reasons or whatever else that they have to maintain a 35-cent fare, I say fine as long as they're willing to pay for it. Now that's my official position. I have personal opinions about fares and fare levels. I do not feel that it's a good use of resources to maintain fares at artificially low levels. I think that it would be better to try to attack the income problem by charging a reasonable fare and then directly subsidizing people who can't afford to pay it. Economically, that will result in a better allocation of resources, I think.

RAILWAY AGE: While the bill provides a total of $11.8 billion over a six-year period, only about $3.9 billion is in a sense new money, the remainder being the capital funding level at about where it's been. Is the amount provided for capital funds adequate?
HERRINGER: Given what we know now about the demands over the next six years, I think it's sufficient as long as it's coupled with a long-term contracting ability. I think that's very important. The $7-billion level in the present bill is adequate for the present time *if* we can fund major projects for more than one year; *if* we can use the $7 billion as contract authority over the period of six years—for example, give Atlanta a grant that will become effective over that whole period.

I think it remains to be seen whether the demand will be greater than the amount now provided. All over the country, cities are reassessing their priorities, not only in transit but in all areas. There's a major reassessment in New York. And in Los Angeles: if we had calculated the demands on our funds six months ago, Los Angeles might have been in there for $6-or$10 billion. Now it's a far different story. So knowing what we know now, I think the $7 billion in capital is sufficient—*if* we can contract for several years.

RAILWAY AGE: What is the present level of UMTA's capital-grant program?
HERRINGER: For this fiscal year, it's $1.050 billion; next year we are asking for $1.1 billion.

RAILWAY AGE: Will you have a legislative program in 1975?
HERRINGER: The next big legislative questions will come up in 1976, the biennial re-estimating of the needs.

But one major item—within the context of the new bill—that needs to be accomplished is to convince the Appropriations Committees that long-term full funding makes sense and that we should be able to use contract authority as it was intended. OMB [the Office of Management and Budget] is now convinced that it's a good way to manage the program; the next hurdle is to convince the Appropriations Committees.

Right now, we make grants on a year to year basis. Atlanta builds its system based on a plan of $2 billion, but has nothing more from us at any given time than a one-year grant. I would like to be in a position where I could say to Atlanta: "Here is a commitment for whatever-million dollars over the next six years, a legal, binding commitment. Now with that understanding of what the Federal commitment is, you can adjust your program accordingly, whether you want to raise more money locally to speed up the schedule, whether you want to borrow against it, or whatever." Right now, though, all I can give them is what I can afford this year. We have no idea what we're going to give them next year or the year after that.

RAILWAY AGE: What would you like to see happen in 1975?
HERRINGER: First, I'd like to see all that money go out, under the new bill, with a minimum of problems. There are going to be many irritations and difficulties, but my real goal in the next six months is to get that money out the door and to the cities that really need it.

Another important priority is going to be the resolution of some major system applications. We have the Center City Commuter Connection project in Philadelphia to be decided, we have the Chicago Loop Distributor project, we have the question of the reassessment of priorities for New York, and in Pittsburgh we have Skybus. These are some long-outstanding questions that seem to be coming to a head.

RAILWAY AGE: When will there be a final decision on Skybus?
HERRINGER: The critical date is Feb. 12. About two months ago I wrote a letter to the Port Authority people, telling them that unless we had a firm commitment of the local share by Feb. 12, we were going to de-obligate the funds. ■

People moving is easy.

Until you try moving them en masse.

North Americans are the world's most mobile people.

But moving them en masse, that's the trick.

So's building the equipment to move them. Better.

Faster. Cheaper.

By the millions. Daily.

Above ground. And underground.

Safely.

It takes healthy chunks of design and engineering and manufacturing savvy.

And Hawker Siddeley Canada has it.

An expertise that's unique in the Canadian transportation equipment industry.

Nations of the world got to know our transit equipment under demanding, practical, showcase conditions.

At Expo '67.

Millions upon millions of people were moved.

Without a scratch. Not a hitch.

Prime contractor for Expo's automatic mass transit system? Hawker Siddeley Canada.

Another come-day, go-day, work-aday showcase: The exemplary subway system of Toronto.

We supplied the major proportion of Toronto Transit Commission subway cars.

And all the equipment for the Ontario government's pace-setting and expanding GO Transit system.

Yet another tough all-weather testimonial is Canadian National's inter-city services. Many of CN's mainline cars came from us.

Hawker Siddeley Canada also built and supplied PATH PA-3 cars for the Port Authority of New York and New Jersey.

End of story?

No.

Still better answers are being sought.

For the immediate and more distant future.

Light rail vehicles.

Intermediate capacity systems.

Systems to serve as city/airport links.

And as feeders to other transportation modes in urban areas....

Right now we're at the forefront of this new knowledge.

Backed by hardwon practical, proven experience.

And it's all available to municipalities, transit authorities, transit operators, railroads.

To anyone considering equipment to replace existing vehicles, system expansion, or implementation of a new system....

Equipment can be built to their design.

Or ours.

Either way, the aim is to serve.

Efficiently. Competitively.

And on time.

Let's talk technical specifics. And real dollars.

Call. Or mail the coupon (just attach it to your letterhead or business card).

We're moving. In a lot of ways.

Hawker Siddeley Canada LTD.

Railway Passenger Equipment
1120 Martin Grove Road, Rexdale, Ontario M9W 4W5
Tel. 416/249-7361 Telex 06-965565

A member of the Hawker Siddeley Group, worldwide suppliers of mechanical, electrical and aerospace equipment.

Your advertisement,
People Moving,
caught my attention.
I have some questions.

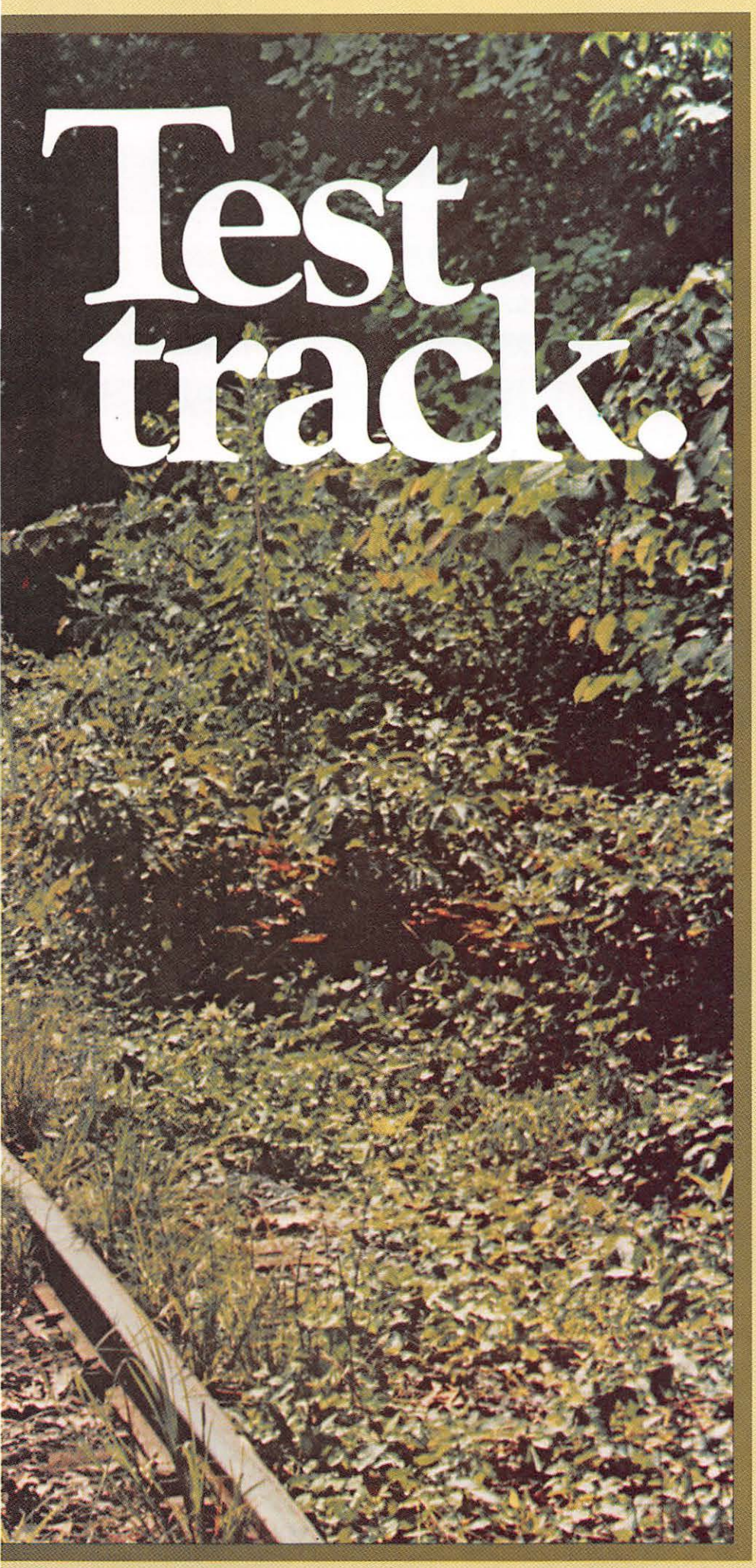
Please contact:

Name_____

Title_____

Please attach to your letterhead or business card.

Circle 9 on Reader Service Card



Over the past 6 years, we have conducted over 3,000 roadbed tests. Our on track/off track trucks traveled over 75,000 miles. All across the country. Covering every major railroad system.

Tests like these help us develop better herbicides and combinations. And improved application systems.

But most important, the tests give us the first hand experience it takes to solve your special vegetation control problems. Problems unique to each part of the country, to each railroad.

After all, you have a different climate, different soils, different vegetation. You need a vegetation control program that fits these conditions. Not somebody else's.

And that's just what you can expect from your Ciba-Geigy man. A program that fits the needs of your railroad. And new programs that fit your needs as they change in the future.

To learn more about our Test track program and how it can help you, call Pete Nicas at (919) 292-7100. Or write him. He'll put you in touch with the Ciba-Geigy representative nearest you.

CIBA-GEIGY Corporation, Industrial Herbicide Sales Department, P.O. Box 11422, Greensboro, NC 27409

CIBA–GEIGY

Test track is a service mark of Ciba-Geigy.

MOVING PEOPLE: The passenger-car

INTERCITY CONTENDER: Canada's prototype LRC (for Light, Rapid, Comfortable) is a low-center-of-gravity train designed to operate over conventional track at 120 mph. It's a product of a consortium that includes MLW Industries, Alcan Canada Products, Ltd., and Dominion Foundries & Steel Ltd.

INTERCITY WINNER: French-designed turbine-powered train (built by ANF-Frangeco and now licensed to Rohr Corp.) has proved itself in test service between Chicago and St. Louis where two sets have been in operation. Four more trainsets have been ordered for the Midwest and seven for Boston-New York.

GE's GTE: General Electric delivered its prototype gas turbine electric (GTE) commuter cars to New York's MTA late in December 1974. GE's power packages are floor mounted and removable from the sides on slide-out, hinged doors. Designed for Long Island service, GTEs are able to operate on both third-rail and non-electrified track.

GARRETT'S ENTRY: Like GE, Garrett Corp. has also built four prototype gas turbine electrics for MTA. Garrett's turbine pods are mounted in the roof; for maintenance or repair, they can be removed and replaced in three hours. MTA will place orders for 200 to 300 GTEs within the next few years.

market gets rolling again

FROM BOEING, THE SOAC: Urban Mass Transportation Administration's State-of-the-Art car, incorporating best of present technology, was tested in New York, Boston and Cleveland (above) in 1974; it's now in Chicago, and will go from there to Philadelphia. Boeing Vertol is systems manager for project.

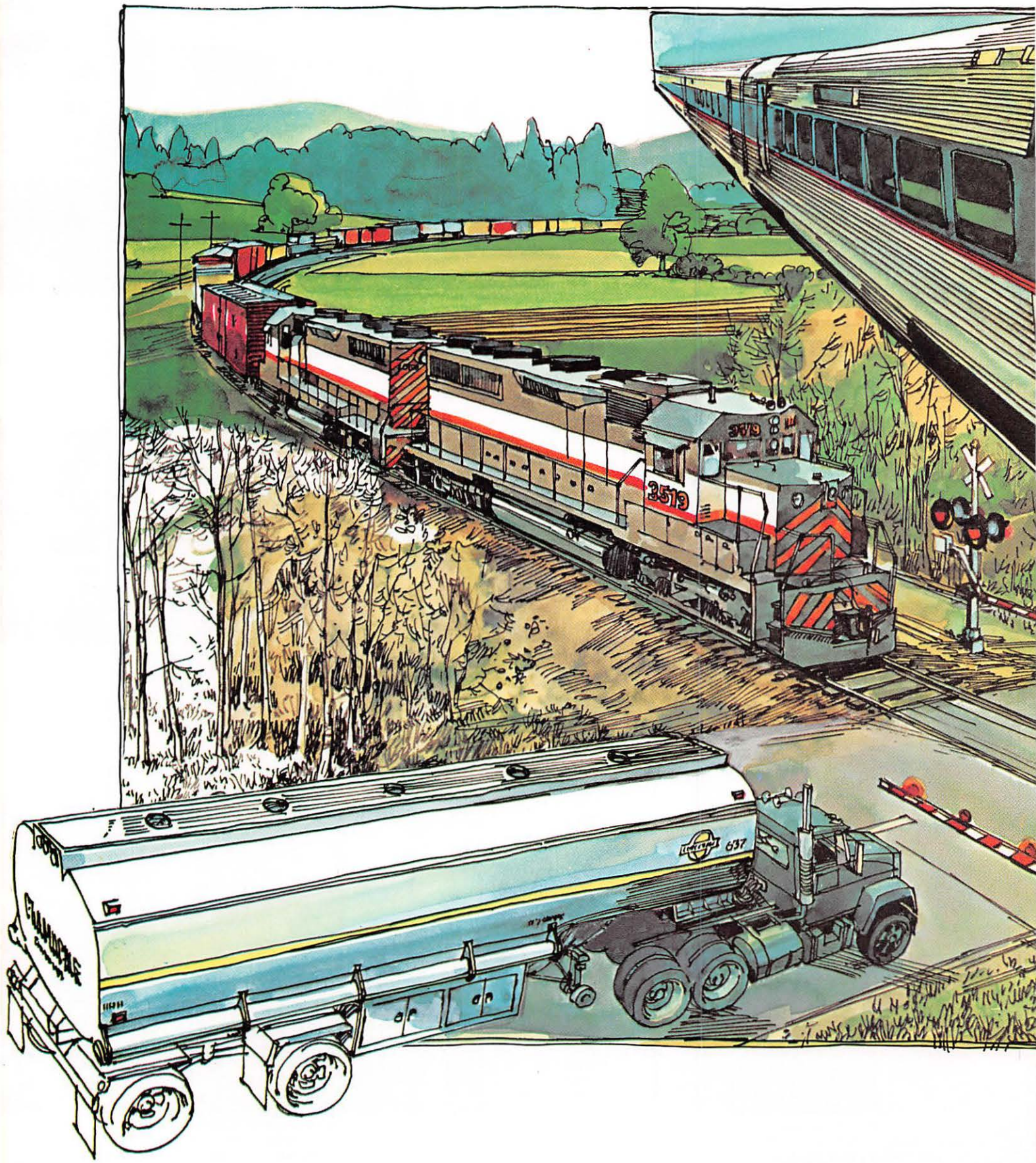
HAWKER-SIDDELEY'S ENCORE FOR TORONTO: Toronto Transit's 240-car fleet, purchased from Hawker-Siddeley, is now being beefed up by 88 more Hawker-Siddeley cars of similar design, though improvements have been made to trucks and ventilation and acoustical equipment. By Jan. 1, 1975, 26 of the new cars had been delivered. TTC will be in the market for 134 more cars in 1975.

FROM PULLMAN, FOR NEW YORK: The first of 745 new R-46 cars Pullman-Standard is building for New York City Transit—largest single order ever placed—were undergoing tests in Chicago late in 1974. A smoother ride is promised by new lightweight airspring trucks supplied by Rockwell.

FROM ROHR, FOR WASHINGTON: Washington Metro's first line is to go into service late in 1975; and late in '74, the Rohr Corp. delivered the first of 300 cars it is building for the Washington Metropolitan Area Transit Authority. The cars are being assembled at Winder, Ga. Aerospace-oriented Rohr says it has applied jet aircraft principles to Metro car design for maximum strength.

FROM GE, FOR NEW HAVEN COMMUTERS: Renaissance of the commuter-car market, primed by an increasing flow of Federal and state money, is exemplified by the Cosmopolitan cars which General Electric is producing at Erie, Pa., for New York MTA/Connecticut DOT, for service on Penn Central's New Haven lines. GE delivered 40 in 1974 and has 100 more on order. GE is also building commuter cars for State of New Jersey and for Southeastern Pennsylvania Transportation Authority.

WABCO Control: First we keep autos



out of trains. Then people out of autos.

Before red lights flash and striped arms drop, sophisticated, extremely reliable monitoring, sensing and signaling equipment operates within tight time tolerances. WABCO has designed and manufactured total systems for every type of crossing protection.

The pressure is building for more crossing protection along your lines. We'd like to put our experience to work for you. It will take some of the pressure off.

Park and Ride.

WABCO control systems also induce people to park and ride. We design and build the highly automated control systems which contribute to on-time, safe arrivals. Our control systems enable an entire transit line to be operated from one control center. We regulate starting and stopping, speed, and even provide voice communications between train attendants and control centers.

What this means is, when it comes to rail transportation, WABCO provides control. We want you to know more about what we do.

Write: WABCO Transportation Systems Group, Union Switch & Signal Division, Westinghouse Air Brake Company, Pittsburgh, Pennsylvania 15218.

TRANSPORTATION FROM THE WORD GO!

The WABCO Transportation Systems Group is: Union Switch & Signal Division, Westinghouse Air Brake Division, WABCO Ltd., Cardwell Westinghouse Company, Fresinbra Industrial, S.A. In transportation, WABCO is also 17 European operations and licensees and agents throughout the world.

WABCO

An American-Standard Company

Circle 27 on Reader Service Card

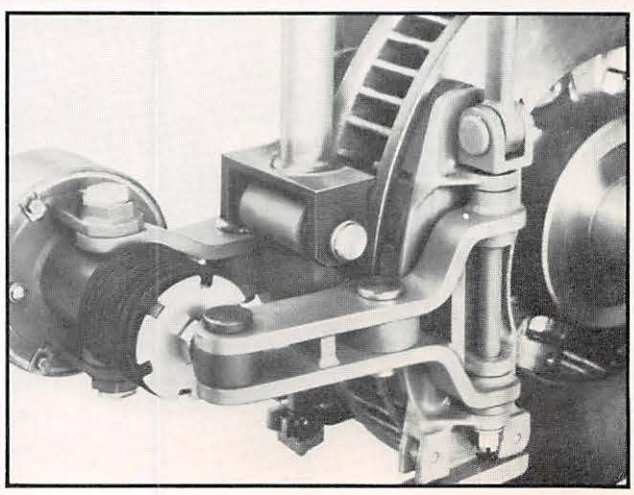
Its top speed also depends on its braking rate.

Silently, Smoothly, Knorr Discs are Designed to Safely Stop the Budd-Built Coaches which will operate at 120 miles per hour for Amtrak Service.

Knorr axle-mounted disc brakes are installed on special steel hubs, permanently pressed on the axle. The special wear-resistant cast iron disc is mounted to the hub by Knorr unique expansion bolts. Eventually, worn discs may be replaced by split friction discs without disassembling the trucks.

All disc brakes are not alike. Knorr has the experience-proven solution to stop high speed trains.

Let Knorr tell you more.



Axle-mounted brake disc.
An example of our products for rail vehicles.

Circle 26 on Reader Service Card

MEMBER RPI

KNORR BRAKE CORPORATION

P. O. Box 1905, Derwood Industrial Park, Rockville, Maryland 20850 U.S.A.
Telephone (301) 424-5500/Telex 898398

E 7461 a

"Good news, indeed, for the American traveler"

Amtrak, a quasi-public corporation which measures success not in profits (it has never made money, and probably never will) but in patronage, is enjoying relatively good times.

The year 1974 was not without problems, and serious problems, for the National Railroad Passenger Corp.: High-level dissatisfaction with its president (who has, in fact, done a far better job than most of his critics are willing to give him credit for) and a well-publicized search for his successor; rising deficits; inadequate and sometimes poorly-maintained equipment; trains whose on-time performance, while vastly improved, still left much to be desired—all these created their share of headlines and helped obscure the year's very substantial achievements. Among them were these:

Ridership: Amtrak rolled up 4.5 billion passenger-miles of service in calendar 1974, up 21.6% over 1973 and 48% over 1971, a statement no other form of private or common carriage can make.

Service: Amtrak operated an average of 208 trains a day over 24,000 route miles in 1974, vs 180 trains and 21,000 route miles two years ago. Six new routes totaling 1,882 miles were added in 1974: Oakland-Bakersfield, 318 miles; St. Louis-Laredo, 731 miles; New York-Montreal, 241 miles; Chicago-Dubuque, 182 miles; Detroit-Buffalo, 251 miles; Chicago-Port Huron, 159 miles. (The last three of these were 403-b routes, so-called after that provision of the Amtrak Act which requires Amtrak to add trains if a state is willing to pick up two-thirds of the operating losses.) In 1975 a second Norfolk-Cincinnati route, mandated by the DOT Secretary, will be added; 403-b possibilities this year include Duluth-Minneapolis and Green Bay-Milwaukee. A new Boston-Chicago train is due next Fall. A planned Washington-Denver service probably won't come in before mid-1975.

Refurbished equipment: By the end of 1974, more than 1,000 of Amtrak's fleet of passenger cars, over half, had been completely overhauled and refurbished, and newly-negotiated maintenance agreements were starting to improve reliability ratios. Amtrak is now negotiating for purchase of Penn Central's Beech Grove, Ind., shops; this would give the corporation direct control, for the first time, over major overhauls now done under contract by the railroads and outside shops.

New power: The last 110 of 150 new 3,000-hp diesel locomotives were delivered in 1974; delivery of 26 high-horsepower electrics for Northeast Corridor service is beginning. (Amtrak says the new power delivered in 1974 "finally broke the back of one of the corporation's toughest early problems—late trains and unreliable schedules. In the final months of 1974, Amtrak's trains were on time more than 80% of the time with substantial numbers of them operating in the 90% on-time range.")

New cars: Some have arrived; many more are on the way. Orders were placed last year for four more French-built turbine-powered trains to join two others already in service in the Midwest; seven more trainsets of the same ANF Industrie (formerly ANF-Frangeco) design are on order from ANF's U.S. licensee, the Rohr Corp. Scheduled to be delivered starting in April are the first of 292 new non-powered Metroliner-type cars being built by Budd; they will be coming off the line at the rate of one a day by midsummer. Meanwhile, three manufacturers late last year submitted bids for the construction of new bi-level passenger cars for medium- and long-distance service outside the Northeast; an order for about 250 of these was to be placed this month, including sleepers, coaches and coach-food service cars. Some 200 new single-level cars are also on the 1975 shopping list.

Reservations: One year ago, with a new computerized reservation system in partial operation, it took Amtrak an average of 6½ minutes to complete a transaction. The new system went into full operation last June 21, and the average transaction time is now down to 3½ minutes. On an average off-season day the reservation system handles 40,000 to 45,000 calls a day; at its holiday peak late last year it was handling 70,000 calls.

Right-of-way: While funds for new equipment are more than adequate, money for roadway improvements is harder to come by. Still, Amtrak was able to budget $50 million for right of way improvements in 1974, and another $50 million this year.

A few months ago, in asking that Amtrak's five-year plan *(see tables)* be printed in the Congressional Record, Senator Lowell P. Weicker (R.-Conn.) called it "good news indeed for the American traveler." The same can be said of Amtrak's 1974 performance. ■

How Amtrak figures the next five years

RIDERSHIP

Fiscal year	Revenue passenger miles (billions)	% increase from 1974
1975	4.8	12%
1976	5.6	30%
1977	6.7	56%
1978	7.7	79%
1979	8.3	93%

REVENUES

Fiscal year	Revenue (millions)	Loss per revenue dollar
1975	$282.0	$0.84
1976	346.7	.69
1977	424.4	.63
1978	471.5	.65
1979	505.3	.60

CAPITAL IMPROVEMENTS

	(millions)
Equipment	$654.8
Repair facilities	233.1
Station facilities	17.2
Right of way	1,190.0
Total	$2,095.1*

*This is in addition to a program totaling $550.4 million approved through fiscal 1974, including $310.3 million for cars and $132.6 million for locomotives and $100 million for facilities.

The passenger-car

These orders are likely to develop in 1975:

For Service on. . .	No. of Cars	Type	Purchaser
Amtrak	200	Intercity (single-level)	Amtrak
Amtrak	250	Intercity (bi-level)	Amtrak
Burlington Northern	20	Commuter (double-deck)	Chicago West Suburban Mass Transit District
Chicago Transit Authority	550	Rapid transit	CTA
Illinois Central Gulf	36	Commuter (double-deck)	Chicago South Suburban Mass Transit District.
Lindenwold Line (PATCO)	44	Rapid transit	Delaware River Port Authority.
Mass. Bay Transportation Authority	80	Rapid transit	Massachusetts Bay Transportation Authority

These cars were delivered in 1974:

For Service on . . .	No. of Cars	Type	Purchaser	Builder
Bay Area Rapid Transit	99	Rapid transit	BART	Rohr
Erie Lackawanna	1	Commuter	State of N.J.	Pullman-Standard
Milwaukee Road	36	Commuter (double deck)	Chicago Northwest Suburban Mass Transit District	Budd
Milwaukee Road	5	Commuter (double deck)	Chicago North Suburban Mass Transit District	Budd
Penn Central	31	Commuter	SEPTA.	GE

Work goes forward on this undelivered backlog:

For service on. . .	No. of Cars	Type	Purchaser	Builder
Amtrak	292	Intercity (single-level)	Amtrak	Budd
Amtrak	55	Intercity (turbine)	Amtrak	ANF Industrie-Rohr
Bay Area Rapid Transit.	80	Rapid Transit	BART	Rohr
Chicago Transit Authority	200	Rapid Transit	CTA	Boeing Vertol
Long Island Railroad	4	Gas turbine electric	MTA	Garrett
Long Island Railroad	4	Gas turbine electric	MTA	GE
Mass. Bay Transportation Authority	175	Light Rail	MBTA.	Boeing Vertol
Montreal Urban Community Transit Commission	423	Rapid Transit	Montreal Metro	Bombardier Co.

The 5-10 Year Outlook:

For service on. . .	No. of Cars	Type	Purchaser
Amtrak	500-1,000	Intercity	Amtrak
Baltimore Metro	160-170	Rapid transit	Maryland DOT
Bay Area Rapid Transit.	100-200	Rapid transit	BART
Buffalo Transit	100	Rapid transit	Niagara Frontier Transportation Auth.
Chicago & North Western.	30	Commuter	C&NW Transportation Co.
Chicago Transit Authority	430	Rapid transit	CTA.
Erie Lackawanna	200	Commuter.	State of N.J.
Lindenwold Line (PATCO).	160	Rapid transit.	Delaware River Port Authority
Long Island Railroad	60	Commuter	MTA.
Long Island Railroad	200-300	Commuter GTE.	MTA
Mass. Bay Transportation Authority	400	Rapid transit and light rail	MBTA
Metropolitan Atlanta Rapid Transit Authority	213	Rapid transit	MARTA
Miami-Orlando	5	Intercity (turbine)	State of Florida
Milwaukee Road	25	Commuter	Mass transit districts or RTA

market at a glance

For Service on. . .	No. of Cars	Type	Purchaser
Metropolitan Atlanta Rapid Transit Authority	175	Rapid transit	Metropolitan Atlanta Rapid Transit Authority
Penn Central	10	Commuter	Southeastern Pennsylvania Transportation Authority
Philadelphia Subway/ Surface Lines	75	Light rail	SEPTA
Red Arrow Division	25	Light rail	SEPTA
Reading	90	Commuter	SEPTA
Toronto Transit Commission	134	Rapid transit	TTC
Total	**1,689**		

For Service on. . .	No. of Cars	Type	Purchaser	Builder
Penn Central	40	Commuter	State of N.J.	GE
Penn Central (New Haven Division)	40	Commuter	MTA/Conn. DOT	GE
Reading	14	Commuter	SEPTA	GE
Toronto Transit Commission	26	Rapid transit	TTC	Hawker Siddeley
Washington Metropolitan Area Transit Authority	2	Rapid transit	WMATA	Rohr
Total	**294**			

For Service on. . .	No. of Cars	Type	Purchaser	Builder
New York City Transit Authority	745	Rapid Transit	MTA	Pullman-Standard
Penn Central (New Haven Div.)	100	Commuter	Conn. DOT*	GE
Penn Central	30	Commuter	State of N.J.	GE
Penn Central	99	Commuter	SEPTA	GE
San Francisco Municipal Railway	100	Light rail	San Francisco Muni	Boeing Vertol
Toronto Transit Commission	62	Rapid Transit	TTC	Hawker Siddeley
Washington Metropolitan Area Transit Authority	298	Rapid Transit	WMATA	Rohr
Total	**2,667**			

*Upon acquisition, 50 cars will be sold or leased to MTA

For Service on. . .	No. of Cars	Type	Purchaser
New York City Transit Authority	1,320	Rapid transit	MTA
New York-Buffalo	25	Intercity (turbine)	State of New York
Newark City Subway	41	Light rail	State of N.J.
Penn Central (Hudson & Harlem Divisions)	100	Commuter (GTE)	MTA
Penn Central	40	Commuter	SEPTA
Philadelphia Subway/ Surface Lines	150	Light rail	SEPTA
Philadelphia Subway/ Surface Lines	100	Rapid transit	SEPTA/City of Philadelphia
Philadelphia Subway/ Surface Lines	20	Interurban	SEPTA
Port Authority Trans-Hudson	70	Rapid transit	PATH
Reading	40	Commuter	SEPTA
Toronto Transit Commission	300	Light rail	TTC
Washington Metro	256	Rapid transit	WMATA
Total	**5,045-5,755**		

ESSAY No. 3 in a series

You say its death has been greatly exaggerated?

In fact, it's coming back to keep the city alive?

Rail transit?

Who let you out?

What we used to call "street cars" weren't superseded technologically by automobiles. They were *crowded off the streets* by them.

Nor was the efficient, narrow-lane guided movement obtained by tracks superseded technologically by wider and wider streets and expressways.

We've turned a third of the city's surface into jammed streets and parking lots—and getting downtown by automobile has exacted a higher and higher cost in time, traffic deaths, gasoline and air pollution.

Acutally, "guided movement" for transportation makes such basic sense that it first appeared in the Late Neolithic and Early Bronze ages in the central and eastern Mediterranean, beginning on Malta. Instead of rails, the guidance system was ruts on the order of four inches deep and eight inches wide formed in the pavement. These ruts prefigured the "inverted ruts," or rails of wood or stone, that were used in mines before the Industrial Revolution. (They even prefigured modern railways and rail transit by providing rutways for sidings and passing places!)

Later mine operators couldn't think of a better way than tracks to keep mine cars from wandering off course and banging into other cars and tunnel walls—or, in time, a better way to reduce rolling friction than metal wheels on metal track.

To eliminate steering, to avoid collisions and to minimize friction are still good ideas—so it should come as a surprise to no one that modern rail transit is now bidding fair in city after city to help undo the fearful mess the automobile has made of traffic.

Traveling on its own right of way—with little if any need to tunnel or build platformed stations—guided movement in the form of light rail transit is making particular appeal to smaller cities. In Canada, Edmonton is building and Vancouver and Calgary are about to build light rail systems. In the U.S., cities now studying the use of light rail include Austin, Dayton, Ft. Worth, Phoenix, Portland, Rochester and San Diego.

What's in it for cities? Light rail, as compared with buses, is. . .

- Faster;
- Cheaper to operate (with one operator per 200-passenger car);
- Smoother and quieter riding;
- Cheaper to power, requiring far less energy per passenger;
- Substantially non-polluting, being powered by electricity, not gasoline or diesel fuel;
- At least twice as space-efficient.

Rail transit dead?

It's the healthiest-looking device for moving people in sight!

—George Dusenbury

Concrete-tie test on Santa Fe called

By MERWIN H. DICK
Engineering Editor

Up to the beginning of 1974 the Santa Fe had made five test installations of concrete ties. Even though the results were something less than satisfactory some lessons were learned. These lessons, along with improved concrete-tie technology generally, have now been put to use in a sixth test installation. This installation might be said, therefore, to represent the summation of everything that has been learned to date about concrete ties in this country and what is needed—in design, in fastenings, in ballast and other factors—to assure optimum performance.

Writing in the January issue of *Railway Track and Structures*, John W. Weber, senior transportation engineer of the Portland Cement Association, said that investigations into the problems observed at the previous test installations on the Santa Fe had provided information "indicating a need for strengthening the requirements for ties, fastenings and ballast." He said that the decision of the road to design a new concrete-tie test track was made because the AREA Preliminary Specifications for Concrete Ties had subsequently been strengthened and because new, stronger concrete ties are available.

W.S. Autrey, Santa Fe System Chief engineer, noting that the Santa Fe has no immediate plans to convert to concrete ties, explained the reasoning of the road in these words: "There has been a shortage of wood ties, however, and we felt it advisable to develop experience with potential substitute materials in the event a change becomes necessary in the future."

LONG WELDED RAIL is placed in position on the test ties. At Mile Post 102, the test section is readily accessible to Santa Fe headquarters at Chicago.

● **Locating the test site.** Several criteria were established for determining the location of the new test section. One was that the track should be laid with 136-lb continuous welded rail. Also, it should have a stable subgrade with no history of poor drainage. Third, the alignment should allow train speeds up to 79 mph.

Other conditions were that the location should be readily accessible to the road's headquarters at Chicago, it should have access by hard-surfaced roads, there should be space for storing track components and stock-piling ballast, and there should be a parallel main-line track over which all trains could operate during the several days required to install the test track.

A location meeting these requirements was found at Mile Post 102 on the westbound main line at Leeds, Ill., about 12 miles southwest of Streator, Weber said. He added that traffic at this location consists of about 20 million gross tons annually. Amtrak and Super C trains operate over the track at this location at speeds up to 79 mph, and other freight traffic operates at speeds up to 70 mph.

● **"Best of its kind."** "No effort was spared in making this installation one of the best of its kind thus far installed in the U.S.," Weber said. This effort included planning sessions between representatives of the Santa Fe and the PCA, during which the track components were selected, a detailed installation plan was developed and some major requirements were established.

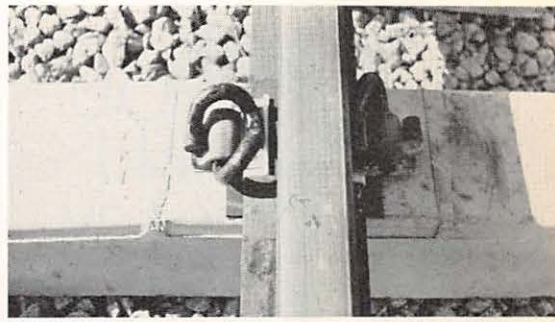
Among these, it was specified that the concrete ties installed would have to pass specified flexural tests to assure compliance with the requirements of the strengthened AREA specifications. Only threadless, flexible-type fastenings were to be used. The existing track structure was to be removed down to the subgrade and the test track constructed as new track from that level up.

Crushed granite ballast obtained from Georgia was to be used in the test track. First, a six-inch layer was to be placed on the subgrade and compacted. After the ties, rails and fastenings had been placed, the remaining ballast was to be placed from a ballast train, and the track raised and tamped to provide 10 in. of ballast beneath the ties.

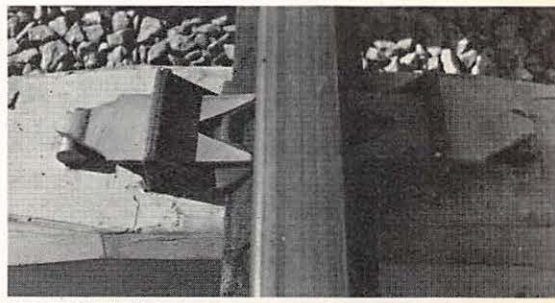
● **Types of ties, fastenings.** Two types of concrete ties were installed in the test track. One was the Gerwick RT-S tie, of which 201 were installed. This tie is 9 feet in length. Of these, 96 ties were equipped with the CS5 fastening and elastomeric rail-seat pads, 95 ties were equipped with the heavy-duty Pandrol fastening and Konvex pads (a fabric-reinforced rubber pad) and 10 ties were equipped with the Dutch DE fastening.

"best of its kind"

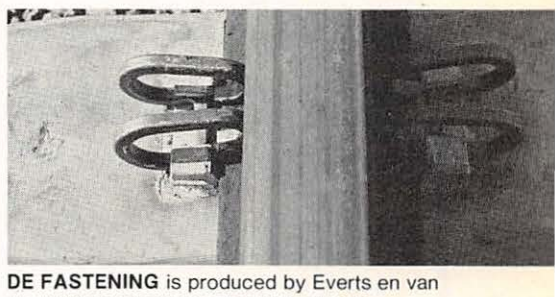
SANTA FE WORKERS apply fastenings to a stretch of the concrete ties. Ballast will be applied later and placed under ties to a depth of 10 inches.



HEAVY-DUTY Pandrol fastening, made by Pandrol, Ltd., England, was supplied by licensee Unit Rail Anchor Co.



CS5 FASTENING is made by Tempered Railway Equipment Co., Sheffield, England.



DE FASTENING is produced by Everts en van der Weijden, Heerlen, The Netherlands.

The Con-Force Costain CC244C tie was the other type of concrete tie installed in the test track. There are 199 of these ties, all of which are equipped with the heavy-duty Pandrol fastening and Konvex pads. These ties are 8.5 feet long. Of the Con-Force Costain ties, 60 were manufactured using a 6000-psi design strength, while the remaining 139 ties were made with a 7,000-psi concrete.

All the ties were pretensioned and were produced by the long-bed method, according to Weber. They were all placed on 24-inch centers. The test section was installed by the Santa Fe's own forces.

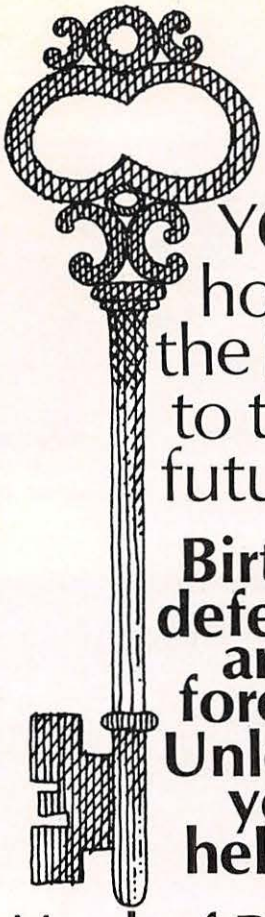
In constructing the test track special attention was given the transitions between the concrete-tie track and the adjacent wood-tie track, Weber said. The first several wood ties at each end of the test section were placed as new wood ties. The tie plates for these ties were driven with both line and hold-down spikes.

Weber explained further that, in an effort to provide control over rail wave action in the transition areas, Compression Spring Clips were installed, two per tie plate, for the first 50 wood ties at each end of the test section. In addition, every second wood tie in the transition areas was box-anchored using conventional rail anchors.

● **Strain gauges for eight ties.** To determine the performance of the concrete ties under traffic, strain gauges were applied to eight of the ties, 18 gauges to each tie. The instrumented ties were installed in track in adjacent pairs at selected points. One week after opening the track to traffic data were obtained from each of the four instrumented tie groupings. Additional data gathering periods are anticipated, Weber says. This work is being done by the Portland Cement Association under contract to the Santa Fe.

Weber explained that the performance of the various track components in the new test installation will be determined by means of periodic visual inspections. He added: "Defects, if any develop, will be recorded and compared with defects observed during inspections of other test tracks having similar track components but different traffic, track or climatic conditions.

"Finally, the level of performance of the concrete tie will be determined. The instrumented ties will enable measurement of traffic-induced bending strains at the critical cross sections. These will be converted to bending moments and compared with the flexural requirements set forth in the AREA Preliminary Specifications for Concrete Ties (and Fastenings)." ■



March of Dimes
THIS SPACE CONTRIBUTED BY THE PUBLISHER

"gerald ford
Not at all a Model T(ransit) Man"

—the first comprehensive survey of the voting record, statements and attitudes on mass transit of the man who would like to lead America into its third century. Plus other features, analysis, commentary and news — all in the November *Third Rail.*

The THIRD RAIL
The Magazine of Rapid Transit
BOX 79 • BABYLON, N.Y. 11702

☐ I have enclosed my check for a subscription to **The Third Rail** for one year (6 issues) beginning with the November issue as follows:
☐ Regular ($4.50)
☐ By First Class Mail ($6.00)

☐ I prefer to receive the November issue of **The Third Rail** separately, for which I have enclosed $1.00.

Name _____
Company _____
Address _____
City State Zip

Circle 13 on Reader Service Card

LETTERS

Gov. Shapp replies

Harrisburg, Penn.

To the Editor:

I was somewhat puzzled by the recent comments of your Washington editor (RA, Dec. 9, p. 18) on my continuing fight to improve and expand rail service in Pennsylvania and the rest of the nation.

On the one hand, he indicated that I had made "premature pronouncements" on abandonment which have been counter productive while on the other he noted that my proposal for a Rail Trust Fund has been "constructive."

I'm not sure how he arrived at the first conclusion, but I wish to note that I have been speaking out regularly on railroad matters since 1962 when—as a private citizen—I began my six-year fight all the way to the Supreme Court against the Penn Central merger.

I admit that in the year since the passage of the Regional Rail Reorganization Act I have used every available opportunity to voice my opposition to wanton abandonments simply because of the serious economic damage they will cause the economy in Pennsylvania and throughout the East.

I have based my opposition on hard facts—not on emotion. In this past year the Commonwealth has committed well over $1.5 million to railroad-oriented economic and transportation studies. Following the publication of the U.S. DOT Report last February we undertook a telephone and field survey of all shippers along the 1,450 miles of potentially excess lines in the Commonwealth. The survey found that up to 75,000 jobs would be lost by the primary and secondary effects of abandoning these lines. Through Commonwealth-sponsored public hearings we amassed more than 2,000 pages of testimony as to the serious effects abandonments on this scale would have on industrial development, coal production and the survival of many smaller communities. This material was summarized in a 300-page book, Pennsylvania's Response to the U.S. DOT Report, which was submitted to the Interstate Commerce Commission and the United States Railway Association on March 28. In short, abandonments of the magnitude contemplated portend an economic disaster of the first magnitude, and as a responsible public official I felt it my duty to speak out early and often on these matters.

My proposal for a Rail Trust Fund cannot be divorced from my long-standing opposition to downgrading rail service in this nation. Instead of cutbacks in rail service it contemplates modernization and expansion to meet the present and future needs of the economy. And it is directly relevant to the issue of service reduction since it says, in effect, that deferred maintenance and rehabilitation costs need no longer be reasons to end rail service.

I have not heard the comments he attributed to unnamed Treasury officials to the effect that this nation cannot afford a Rail Trust Fund, but I think they reflect a misunderstanding of the proposal. For example, he noted one objection is that the Rail Trust Fund "depends on government money." The $13 billion needed to modernize the railroads would not come from the Federal budget but from obligations to be financed by a modest surcharge on freight revenue. These borrowings would average only about $2 billion a year, compared with gross long-term borrowings by government and industry which now total more than $100 billion a year.

If we are to rehabilitate the railroads, the capital will have to come from somewhere. Whether the railroads borrow it on their own (I doubt that they will be able to) or a Trust Fund borrows it, the source will ultimately be the private money markets. To say that government can't afford a program like the Rail Trust Fund is to say we might as well let the railroads go out of business—and I for one do not find this an acceptable alternative.

Moreover, I would say we cannot afford not to have a Rail Trust Fund for the following reasons:

1. The continued growth of our economy is dependent on the revitalization of the railroads. If the economy doesn't grow, the Treasury's problem with financing social programs will worsen. Without an economically viable economy there will be no economically viable government.

2. In light of the recent Supreme Court ruling on the RRR Act, the Rail Trust Fund is more attractive than ever. The Court ruled that the Treasury will be obligated to pay the claims of Penn Central and other creditors which might run to $10 to $12 billion. For about this same sum, through the Rail Trust Fund, we could be buying a modern expanded rail system nationwide—and this government-backed investment would obviate the need for additional payments to the creditors.

For too long our nation's rail problems have been ignored. Now that they have reached crisis proportions a public dialogue has begun, and I welcome the participation of Railway Age in it.

Milton J. Shapp
Governor
Commonwealth of Pennsylvania

75 YEARS AGO IN

The Railway Age and Railroad Gazette

(Jan. 5 and Jan. 12, 1900)

The long, dark era of railway bankruptcies which culminated in 1893, when 74 companies, with nearly 30,000 miles of lines, were handed over to receivers, has ended, and the new century starts with the railways of the United States, with very few exceptions, in a solvent and hopeful condition.

***

The present Union Pacific Company affords an excellent illustration of a great railroad working out its own salvation freed from entangling alliances with the Government. The plan of settlement with the United States and other creditors proves to have been particularly happy, partly, however, of course, because of the extraordinary prosperity of the period. The new corporation took possession of the main line on February 1, and of the Kansas Pacific lines on April 1, 1898. During the past 18 months the Omaha and Republican Valley roads, the Julesburg district and some other branches have been taken in, and the Oregon Short Line and and the Oregon Railroad & Navigation virtually have been consolidated with the Union Pacific. In less than two years, accordingly, with Government hands off and a practical capitalization, the company has developed from a beginning with nothing to a point at which it is earning 4 per cent on $100,000,000 of preferred stock and toward 5 per cent on nearly another $100,000,000 of common stock, after putting very large amounts of surplus earnings into permanent improvements.

***

The Panama Canal Company of America has been incorporated in New Jersey with an authorized capital of $30,000,000. The object of the company is to acquire by purchase the ship canal of the Compagnie Nouvelle du Canal de Panama and the railway across the isthmus of Panama; also, to construct, equip and operate said canal and the railway and the various enterprises connected therewith.

***

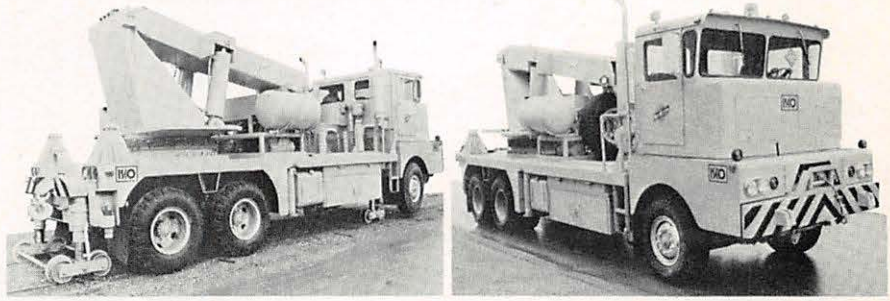
The Cascade tunnel of the Great Northern line has reached a depth of 4,700 feet on the Wellington end and 4,300 feet on the Cascade end. The total length will be 13,253 feet, and it is expected that it will be completed by October 1, 1900. The tunnel is of uniform size throughout, 24 feet high, and 20 feet wide. The working force is 750 men, and progress is made at the rate of about 10 feet per day.

Faster, Easier, Safer

75-ton mobile hydraulic crane lifts and rerails locomotives

ISCO's IC-75 Mobile Hydraulic Crane has a powerful 75-ton lifting capacity ideally suited for rerailing locomotives and rail cars. The main boom has a 10-ft. lifting radius and moves the 75 tons through a 42-degree arc over the rear of the chassis. The inner boom extends to 14 ft., rotates through 360 degrees and is rated at 7½ tons.

Capable of traveling quickly over rail or road, the IC-75 MHC rerails locomotives or freight cars at a fraction of the cost of other methods. Its 75-ton lifting capacility and optional 100,000 pound rear winch make it a natural for untangling main line wrecks. Its hydraulically operated boom allows precise, controlled lifting and load movement without fear of boom failure or cable whiplash. And its low profile eliminates troublesome problems with overhead power lines or tunnel operations.



We've got the better one

ISCO MANUFACTURING COMPANY, INC.
A company of ISC Financial Corporation
13850 Wyandotte • P. O. Box 8620 Kansas City, Missouri 64114 • 816/942-6200

Circle 8 on Reader Service Card

Our batteries work all the way down your line.

Modern rail transportation systems are placing heavier demands on batteries. A growing array of auxiliaries and sophisticated car equipment demands increased power. Along the right of way, battery systems are driving complex signal systems as well as power switching and microwave relay stations.

Exide has pioneered in rail transportation systems. Our batteries have proven themselves on virtually every railroad in the United States. And our years of on-the-job experience combined with extensive research programs have developed the power-packed battery systems needed by modern railroads.

Today, the Exide product lineup is available for every conceivable application. And every one of our battery systems features long life, excellent performance and minimum maintenance. Exide. The company with the battery systems you can depend on. All the way down the line.

ESB Exide

Box 5723, Phila., Pa. 19120

Exide is a registered trademark of ESB, Inc., Phila., Pa., for batteries and systems.

All systems go with Exide.

Market Outlook

CARLOADINGS

Loadings of revenue freight in the week ended Dec. 21 totaled 447,425 cars, according to the Association of American Railroads. This was a decrease of 20,635 cars, or 4.4%, compared with the previous week, and a decrease of 43,700 cars, or 8.9%, compared with the corresponding week last year. Ton-miles generated by carloadings in the week ended Dec. 21 are estimated at 14.9 billion, a decrease of 5.2% below the corresponding week of 1973.

REVENUE FREIGHT CARLOADINGS

	Dec. 21 week	Dec. 14 week
Grain	26,204	27,434
Farm products	12,222	12,819
Metallic ores	30,231	33,220
Coal	80,395	78,854
Crushed stone, gravel & sand	19,187	22,888
Nonmetallic minerals	14,121	14,867
Grain mill products	19,005	20,260
Food and kindred products	20,824	21,076
Primary forest products	21,008	23,775
Lumber & wood products (except furniture)	11,422	11,424
Pulp, paper & allied products	20,219	20,771
Chemicals & allied products	27,236	28,028
Petroleum products	8,728	9,136
Stone, clay & glass products	14,456	16,157
Coke	8,552	7,013
Metals & products	23,022	22,608
Motor vehicles & equipment	14,816	20,047
Waste & scrap materials	15,324	16,232
Forwarder & shipper assn. traffic	8,802	8,919
All other carloads	51,268	51,055
LCL traffic	383	440
Total cars loaded	**447,425**	**467,023**
Cumulative total, 51 weeks	1974	1973
	26,111,618	**26,981,315**
Estimated revenue ton-miles (billions) 51 weeks	829.9	823.7

PIGGYBACK LOADINGS

U.S. piggyback loadings for the week ended Dec. 14 totaled 25,382 cars (22.6% below the corresponding week last year) and 43,248 trailers or containers (down 23.6% from 1973). Cumulative volume for the first 50 weeks of 1974 is 1,464,329 cars (off 1.7% from last year) and 2,525,414 trailers or containers (down 2.1% from 1973).

IN CANADA

Canadian railway revenue freight loaded in the nine-day period ended Nov. 30 totaled 6.329 million tons, down 4.3% from 1973. Cars loaded decreased 5.3% to 106,294. Cumulative loadings for 1974 were up to 224,303 million tons, 1.6% above 1973.

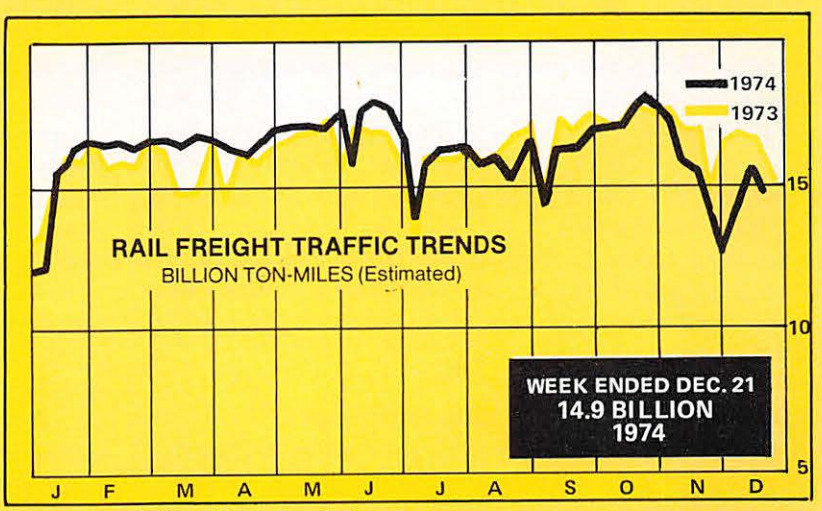
● *Boston-San Francisco.*—Standard light rail vehicles being built for Boston and San Francisco will be equipped with noise-suppressive wheels made by Standard Steel. The Acousta-Flex wheels will be supplied to Boeing Vertol, which will install them on 150 cars for the Massachusetts Bay Transportation Authority and 100 others for the San Francisco Municipal Railway Improvement Corp. The $1.2-million contract calls for wheels weighing 260 pounds each.

● *Lehigh Valley.*—Delivery began last month of 12 2,250-hp diesel-electric locomotive units under a financing agreement between the U.S. DOT, the trustee of the LV and the USRA. The units, built by General Electric, cost $3.4 million and will replace 18 old locomotives.

● *Massachusetts Bay Transportation Authority.*—The Urban Mass Transportation Administration has granted $23,040,424 to MBTA to assist in advancing MBTA's South Shore Rapid Transit Project. (This grant is the second to tap the $671 million made available for mass transit in the Boston area by means of a transfer of funds originally earmarked for interstate highway construction.) The new grant will supplement previously approved funding to extend rapid transit service 3.2 miles from Quincy Center to South Braintree. The local one-fifth share of the total project cost will be provided by MBTA from the proceeds of bond sales.

● *Western Fruit Express.*—Is retrofitting 152 mechanically refrigerated cars specifically for speedy loading and unloading of bulk potatoes. Carrier Transicold Co. equipment is replacing existing refrigeration systems in each car. The equipment can keep each car's interior temperature at any specified point between -10 degrees and +70 degrees F.

● *Westinghouse Electric Corp.*—Received an order for about $1 million to supply three transit vehicles and additional electrical equipment to Seattle-Tacoma International Airport's underground transit system.



Source: Association of American Railroads

Moving People

150 APPLY FOR TOP BART JOB

The Bay Area Rapid Transit District's board of directors has named a committee to find a general manager for BART—and as of Jan. 1, 150 applications had been received. No final decision is likely to be reached for another couple of months, a spokesman indicated. Since B.R. Stokes resigned the post last summer to become head of the American Public Transit Association, Lawrence D. Dahms has been acting general manager. Meanwhile, BART continues to have equipment problems. Late in December, only about half of the system's cars were available for service at any given time—and in one week the equipment-availability ratio dropped to 48%. Nonetheless, ridership late in the year was averaging about 125,000 a day, compared with 115,000 in October soon after full-system operation began. On the day after Thanksgiving—the traditional day for the beginning of the Christmas shopping season—ridership peaked at 175,000.

AMTRAK IS STILL LOOKING

For much of 1974, Amtrak directors were searching for a new president to replace Roger Lewis; early in '75 the search was continuing. In recent months the likeliest candidate has appeared to be Paul H. Reistrup, a senior vice president of Illinois Central Gulf. Amtrak sources confirm that a principal stumbling block has been money. Reistrup is in the $70,000-plus bracket at ICG. The Congressionally-imposed ceiling on the Amtrak job has been $60,000. Late in December the feeling within Amtrak was that the money problem would be licked and Reistrup would take the post.

NEW YORKERS LOVE A BARGAIN

The Sunday half-fare plan of New York's Metropolitan Transportation Authority attracted 28.7 million additional riders during its first full year of operation, and the success of the bargain fare has led to its extension for at least another six months. The new riders didn't come cheaply: while Sunday ridership was rising by 30%, revenues were declining by 12%—an over-all decrease of $4.1 million. MTA Chairman David L. Yunich said an additional ridership increase of 17% would be needed to break even and offset additional costs incurred in administering the program.

N.Y. PLANS NOISE-REDUCTION PROGRAM

New York's Metropolitan Transportation Authority is embarking on a 10-year, $62.5-million subway noise reduction program. The Federal Urban Mass Transportation Administration is expected to provide about $50 million of the total funding. MTA Chairman David L. Yunich said $10 million is budgeted for 1975. In its early stages, the program will include implementation of techniques to reduce noise at 20 stations; welding of rail; and intensified use of rail grinding and wheel-trueing equipment. The decision to proceed with the program followed tests at the BMT 49th St. station, where noise was reduced by more than half through installation of acoustic sound-absorbing material between tracks, on ceilings over track areas, and below the platform edge.

CTA OPERATING BUDGET UP 13%

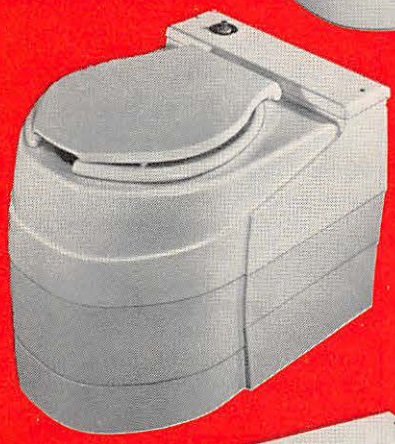
Chicago Transit Authority has worked up its 1975 operating budget—and it's a big one, which will call for a substantial increase in public funding. For '75, CTA says operating expenses will be $291.8 million, up by 13% from 1974, "largely because of inflation." On the revenue side, CTA estimates the total for the new year at $198.2 million (including $173.8 million from fare-box collections), up only slightly from $194.9 million in 1974. Public-funding requirements? They're estimated at $95.3 million (to be handled through the new Regional Transportation Authority), up from $65 million in '74. Budgeting is based upon a continuation of an uptrend in patronage which began last year. Ridership increased in '74 by 4.5%, and the new-year estimate is for a 2.2% gain.

N.J. PONDERS WEST SHORE SERVICE

The State of New Jersey is preparing a new transportation master plan, and, says Transportation Commissioner Alan Sagner, restoration of some form of mass transit service in the right of way of the former West Shore Line in Bergen County will get renewed consideration in the plan. It's due this spring. Sagner's statement followed a meeting with mayors from affected communities which had paid for a preliminary study of the operating requirements and capital and operating costs needed to reestablish commuter rail service in the populous corridor.

CN INCREASES PASSENGER FARES

A 10% increase in Canadian National's intercity and transcontinental passenger fares goes into effect Jan. 15. Garth Campbell, vice president of passenger marketing, cited rising costs as the reason for the increase. CN last raised its passenger fares on April 1, 1974.



no matter how
you look at it
there is just
one toilet
that stands alone.
one toilet that
has gained
general acceptance
world wide.
one toilet familiar
to all who have ever
flown in an airplane,
traveled in a bus,
sailed in a boat,
or lived in a
recreational vehicle.
the one chemical
retention toilet
now available,
designed especially
to recognize
the rugged requirements,
for all your
sanitation needs:

locomotive
caboose
work equipment . . .

the Vapor NEWMATIC* toilet,
the toilet used
by more than 40 railroads**
now available in stainless steel
become *more* familiar,

*TM Monogram Industries, Inc.
**names furnished on request

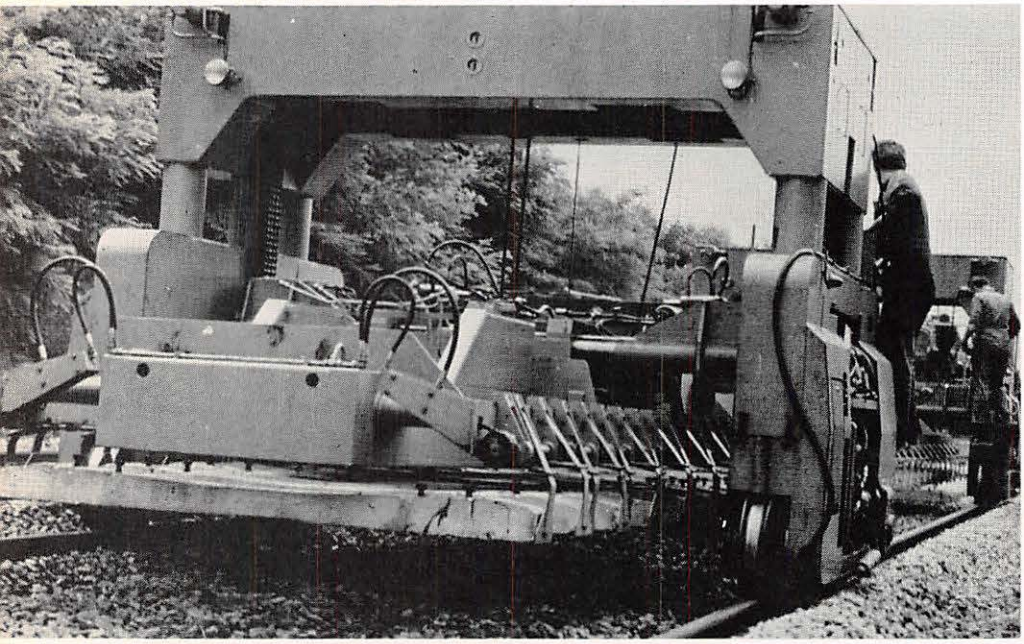
write:

VAPOR CORPORATION

TRANSPORTATION SYSTEMS DIVISION
6420 WEST HOWARD STREET • CHICAGO, IL 60648
IN CANADA—VAPOR CANADA LIMITED

Circle 16 on Reader Service Card

Products Report



Replaces wood-tie track with concrete ties

A new system for track relaying with concrete ties has been introduced in this country by Railway Maintenance Corp.

Developed in France, the RMC/Secmafer system will make out-of-face replacement of wood-tie track with concrete ties—from disposal of old material to completed track, ready for scheduled speed. The system also adapts for new track construction using concrete ties.

Basis of the system is a moving beam-and-gantry arrangement which lifts panels of old track and moves them to cars on a work train. The same units move to a material car where they pick up a section of concrete ties, which then are positioned with correct spacing, where the track panels were removed.

Used during application of continuous welded rail, the work train and material cars operate on old rail, with the gantry and beam segments operating on newly laid welded rail, serving as an auxiliary track.

The RMC/Secmafer system also includes an angle dozer for plowing and compacting the shoulder to receive the welded rail, a positioning device with threader for moving welded rail from tie ends to prepared shoulder, and a track-lining unit which positions and aligns the concrete ties.

Circle 60 on reader service card

Catenary tensioning device offers high performance

A gas-hydraulic device for maintaining constant tension in overhead power supply lines of electrified railroads has been developed by two British companies in conjunction with British Rail. The device is said to give superior performance in a variety of climatic conditions, with major savings in maintenance compared with other systems. The devices—self-lubricating, easy to install and tamperproof—can be used in existing systems as well as in new ones. The closely controlled tensioning action insures highly efficient transfer of electrical power from the overhead lines to the locomotive pantograph over the whole tension cable for distances up to 1,640 yards. The devices can be mounted on any type of bridge and installed in-line in tunnels without need for further excavation.

Circle 61 on reader service card

Remote valve and switch control is now available from stock

A system using existing voice links to provide centralized control of remote valves and switches is available from Electronic Modules Corp. More than 50,000 hours of initial testing, followed by years of field use (primarily in controlling railroad wayside transceiver networks) point to an extremely high level of reliability and security. The system—called EMCON II—is modular and field-expandable. Price ranges from $6,500 for one master unit and one remote handling 20 outputs, to $15,000 for one master and five remotes handling 100 outputs. Voice-communication facilities are included in both master and remote units, which are connected over any 600-ohm link capable of handling the 300-3000 Hz audio range. The system is available on a stock-delivery basis.

Circle 62 on reader service card

New hand brake is added to manufacturer's line

The engineering and design of a new hand brake, called Model 5600, has been completed by Ellcon-National, Inc. The intermediate power hand brake is approved as an AAR S-63-2 brake. The 5600 hand brake will produce an average force of 6,225 lb when used with an AAR 1966 bell crank over the travel range of the bell crank, and an average force of 4,475 lb when used with an AAR sheave wheel with unlimited chain travel.

Circle 63 on reader service card

Exterior cleaner protects polycarbonate windows

A Lexan-safe, low acid exterior wash, designated F.O. 479, contains no hydrofluoric acid. The product, developed by Fine Organics, Inc., will clean and brighten stainless-steel, aluminum and painted carbodies while assuring safety to personnel. F.O. 479 will remove built-up oxide deposits, as well as road film and oil. Its inhibitors prevent streaking and clouding of polycarbonate windows. The compound is a one-stage acid cleaner which may be used in wash racks or with brush application.

Circle 64 on reader service card

NEW LITERATURE

TRACK JACKS. A 12-page, railroad equipment catalog has been issued by Templeton, Kenly & Co. The catalog describes and illustrates Simplex and Pine mechanical and hydraulic railroad equipment, including track jacks, journal jacks, ratchet jacks, rail puller-expanders, riggers jacks, hydraulic cylinders and pumps, as well as a newly developed hydraulic power package for rerailing, rip track and repair shop applications.

Circle 70 on reader service card

Paul D. Howard
FreightMaster

Elwyn Seay
FreightMaster

William C. Wright
FreightMaster

John E. Rooney
P-S

Albert J. Ohlsen
P-S

Norman W. Seip
Westcode

SUPPLIERS

Paul D. Howard, sales manager, **Freight-Master,** Fort Worth, Tex., has been appointed vice president-sales. **Elwyn Seay,** manager of engineering, has been promoted to vice president-engineering. **William C. Wright,** manager of manufacturing, has been appointed vice president-manufacturing.

John E. Rooney, assistant corporate controller, **Pullman Incorporated,** has been named vice president, finance-freight, **Pullman-Standard division. Albert J. Ohlsen,** assistant to the vice president of purchasing-freight, **Pullman-Standard,** has been appointed vice president, purchasing-freight for the division, to succeed **M.R. Bock,** who has retired after 39 years' service.

Knorr Brake Corp. has moved its permanent sales, service and warehouse facilities to Derwood Industrial Park (P.O. Box 1905), Rockville, Md. 20850–Telephone: (301) 424-5500. **Gregory G. Gagarin** is president of the corporation.

Peter R. Urban has been named Eastern District sales representative, **Union Tank Car Co.,** New York.

Roland G. Hargreaves has been named president, **Stanley H. Smith & Co., Inc.,** Cleveland.

William E. Becker, assistant general service manager, marine, **Electro-Motive Division of General Motors,** has been advanced to general service manager, to succeed **Frederick T. Battey,** retired. **Walter R. Weck,** regional service manager, southeastern region, Atlanta, has been named assistant general service manager, railroad and utility equipment. Mr. Weck succeeds **Willard A. Gardner,** who succeeds Mr. Becker.

Robert T. Brumbaugh, president, **Streeter Amet Division, Mangood Corp.,** Grayslake, Ill., has been elected vice president of development of the parent corporation. Succeeding Mr. Brumbaugh is **George Krassner,** partner in a consulting firm, who has been named Streeter Amet president and general manager.

TRANSIT

Norman W. Seip, president of **Westcode, Inc.,** a supplier of brake and door equipment for the urban mass transit and railroad industries, has announced establishment of a new manufacturing facility in King of Prussia, Pa. Westcode is a wholly owned subsidiary of **Westinghouse Brake & Signal Co., Ltd.** of Great Britain. The parent company has manufacturing subsidiaries in Australia and South Africa, in addition to the recently formed United States company.

Thomas D. Boyle, superintendent of methods-standards, safety and inspection, **Chicago Transit Authority,** has been named manager of the new Department of Safety. He will continue to serve as the CTA's liaison representative with the Chicago Police Department in a security program for CTA riders and operating personnel.

Ms. Emarie Joi Thompson has been promoted to the newly created post of director, Community Relations Division, **Metropolitan Atlanta Rapid Transit Authority.** Since Feb. 1973, Ms. Thompson has served MARTA as community relations officer, senior community relations officer, and acting manager of community relations.

Jerome G. Tudos is office manager and **A. Richard Lowing,** chief engineer, of the recently opened office of **Sanders & Thomas, Inc.,** at 66 Luckie Street, Atlanta, Ga. The company is designing a section of the West Line, **Metropolitan Atlanta Rapid Transit Authority** $1.8-billion two county rail and busway system, in joint venture with **Lindsey and Ritter, Inc.,** Albany, Ga.

Jud Lawrie has been named director of research, **Chicago Transit Authority.**

Edward M. Gregerman has joined the transportation division, **Kaiser Engineers,** as staff specialist for transit operations and maintenance. He previously was director of maintenance, **Bay Area Rapid Transit District.**

Nicholas E. Bade has been appointed transit marketing program manager, Office of Transit Management, **Urban Mass Transportation Administration, U.S. Department of Transportation.**

Richard P. Godwin, a **Bechtel Incorporated** vice president, has been named division manager, Hydro & Community Facilities Division. He replaces **John P. Buehler,** vice president, who has retired after 40 years in the engineering profession. Mr. Buehler will continue as executive consultant on rapid transit projects.

David B. McBrayer has joined **Dalton-Dalton-Little-Newport,** Cleveland, as an associate and transportation project manager. McBrayer, who was responsible for transit projects throughout the midwest for **A.M. Voorhees,** was resident project director for the Five-County Transit Study in Cleveland, Ohio.

A.W. Scullen has been appointed proposal engineer-transit signaling markets, **Union Switch & Signal Divison, WABCO,** Swissvale, Pa. Mr. Scullen joined WABCO in 1952 and was a field coordinator working with New York City Transit Authority installations prior to his current assignment.

Roger T. Welcome has joined the transportation division of **Kaiser Engineers** as staff specialist for transit system specifications. Mr. Welcome was previously chief of the specifications department, **Metropolitan Atlanta Rapid Transit Authority** project with Parsons Brinckerhoff-Tudor-Bechtel.

L.A. Kimball has been appointed the first deputy administrator, **Mass Transit Administration, State of Maryland Department of Transportation,** Baltimore. Mr. Kimball was formerly assistant general manager, **Bay Area Rapid Transit District,** Oakland, Calif. for 10 years.

Walter S. Bellian has been appointed sales and service manager, rail passenger equipment, **Hawker Siddeley Canada Ltd.,** Canadian Car Division. Mr. Bellian, **Norman W. Kuster,** research and development manager, and **William D. Brown,** service manager, are located in Toronto, Ont. Mailing address is P.O. Box 6001, Toronto A.M.F., Ont., Canada L5P 1B3.

William D. Volkmer has joined **Kaiser Engineers'** transportation division as project engineer. Mr. Volkmer has been assigned to the team supervising assembly of vehicles for Boston's light rail vehicle program at the Philadelphia plant. Mr. Volkmer was previously a customer service engineer, transportation systems product department, **General Electric Co.**

OBITUARY

Frank J. Stanton, 54, director of personnel and public relations for the **Western Railroad Association,** died Dec. 31 at Northwest Community Hospital, Arlington Heights, Ill. He began his railroad career in 1946 with the New York Central and joined the Association of Western Railways, predecessor of WRA, in 1948.

Viewpoint

Going into '75: All the trends aren't bad

While it is true that one swallow doth not summer make, it is also true that one is better than none—and right now a couple of harbingers of a favorable change in the climate are discernible on the railroad horizon. It is our purpose here, in a season of almost unrelieved gloom, to take cautiously optimistic note of them.

—Although the computers have not yet churned out their final verdict on '74, there is good reason to believe, says the Association of American Railroads, that rails carried a larger share of the total national freight package last year than they did the year before—and that the share of the intercity truckers dropped correspondingly. This turnaround, an acceleration of a trend that began to be evident two or three years ago, could prove to be of far greater importance than any of the ephemeral difficulties now confronting all transportation modes. (To be sure, this silver lining has its cloud: On Jan. 4, President Ford signed into law the 1974 Highway Act, which increased by around 10% the tonnages which with which truckers are permitted to clobber the Interstate Highway System. The American Automobile Association was among those groups that unsuccessfully urged the President to veto the big-truck bill, whose path through the 93rd Congress was blitzed, according to the Washington Star-News, by "a lobbying drive that included last-minute campaign contributions to 113 members of the House." There was considerable feeling that the new Congress early in 1975 would reconsider, revote and revoke this hastily-wrapped Christmas present to the concrete and rubber lobby.)

—Further evidence that America's love affair with concrete may be cooling came from no less an authority than the Federal Highway Administration, which reported in January that motor vehicle travel on roads and streets had declined by 3% in 1974—to 1,270 billion miles from the previous year's 1,309 billion. Amtrak, at the same time, was reporting an increase of nearly 22% in passenger miles in 1974, and this came on top of an increase of similar magnitude in 1973. Meanwhile, public transit ridership, according to the American Public Transit Association, was rising by 7.8%, following an increase of 0.4% the previous year when a long decline was arrested and reversed. True, highway travel was down only slightly from a very large base, and Amtrak and public transit ridership were up from comparatively small bases. Still the trend *was* upward—for the first time since World War II.

AND THEN THERE'S INFLATION

Going into 1975, the railroads also have their share of unfavorable trends. By far the most serious of these is the rising cost of everything that goes into running a railroad. The article on p. 10 of this issue describes what happened to railroad prices last year: railroads paid 106% more for diesel fuel, 45% more for crossties, 42% more for rail, 62% more for car wheels (when they could find them at any price), 47% more for sheet steel than they paid in 1973.

On the other hand, the railroads themselves won substantial increases in 1974 for the prices they charge—importantly, a 10% rate increase in the landmark Ex Parte 305-A case, in which the ICC recognized the industry's need not only to cover rising costs but to build up investment capital. Thus, while ton-miles were only holding steady with 1973's record levels, revenues in 1974 were up 15%, and the rate of return on investment rose from 3% to 4%. Not enough, not nearly enough—but again, the trend, for a change, was in the right direction.

Paul D. Howard
FreightMaster

Elwyn Seay
FreightMaster

William C. Wright
FreightMaster

John E. Rooney
P-S

Albert J. Ohlsen
P-S

Norman W. Seip
Westcode

SUPPLIERS

Paul D. Howard, sales manager, **FreightMaster,** Fort Worth, Tex., has been appointed vice president-sales. **Elwyn Seay,** manager of engineering, has been promoted to vice president-engineering. **William C. Wright,** manager of manufacturing, has been appointed vice president-manufacturing.

John E. Rooney, assistant corporate controller, **Pullman Incorporated,** has been named vice president, finance-freight, **Pullman-Standard division. Albert J. Ohlsen,** assistant to the vice president of purchasing-freight, **Pullman-Standard,** has been appointed vice president, purchasing-freight for the division, to succeed **M.R. Bock,** who has retired after 39 years' service.

Knorr Brake Corp. has moved its permanent sales, service and warehouse facilities to Derwood Industrial Park (P.O. Box 1905), Rockville, Md. 20850–Telephone: (301) 424-5500. **Gregory G. Gagarin** is president of the corporation.

Peter R. Urban has been named Eastern District sales representative, **Union Tank Car Co.,** New York.

Roland G. Hargreaves has been named president, **Stanley H. Smith & Co., Inc.,** Cleveland.

William E. Becker, assistant general service manager, marine, **Electro-Motive Division of General Motors,** has been advanced to general service manager, to succeed **Frederick T. Battey,** retired. **Walter R. Weck,** regional service manager, southeastern region, Atlanta, has been named assistant general service manager, railroad and utility equipment. Mr. Weck succeeds **Willard A. Gardner,** who succeeds Mr. Becker.

Robert T. Brumbaugh, president, **Streeter Amet Division, Mangood Corp.,** Grayslake, Ill., has been elected vice president of development of the parent corporation. Succeeding Mr. Brumbaugh is **George Krassner,** partner in a consulting firm, who has been named Streeter Amet president and general manager.

TRANSIT

Norman W. Seip, president of **Westcode, Inc.,** a supplier of brake and door equipment for the urban mass transit and railroad industries, has announced establishment of a new manufacturing facility in King of Prussia, Pa. Westcode is a wholly owned subsidiary of **Westinghouse Brake & Signal Co., Ltd.** of Great Britain. The parent company has manufacturing subsidiaries in Australia and South Africa, in addition to the recently formed United States company.

Thomas D. Boyle, superintendent of methods-standards, safety and inspection, **Chicago Transit Authority,** has been named manager of the new Department of Safety. He will continue to serve as the CTA's liaison representative with the Chicago Police Department in a security program for CTA riders and operating personnel.

Ms. Emarie Joi Thompson has been promoted to the newly created post of director, Community Relations Division, **Metropolitan Atlanta Rapid Transit Authority.** Since Feb. 1973, Ms. Thompson has served MARTA as community relations officer, senior community relations officer, and acting manager of community relations.

Jerome G. Tudos is office manager and **A. Richard Lowing,** chief engineer, of the recently opened office of **Sanders & Thomas, Inc.,** at 66 Luckie Street, Atlanta, Ga. The company is designing a section of the West Line, **Metropolitan Atlanta Rapid Transit Authority** $1.8-billion two county rail and busway system, in joint venture with **Lindsey and Ritter, Inc.,** Albany, Ga.

Jud Lawrie has been named director of research, **Chicago Transit Authority.**

Edward M. Gregerman has joined the transportation division, **Kaiser Engineers,** as staff specialist for transit operations and maintenance. He previously was director of maintenance, **Bay Area Rapid Transit District.**

Nicholas E. Bade has been appointed transit marketing program manager, Office of Transit Management, **Urban Mass Transportation Administration, U.S. Department of Transportation.**

Richard P. Godwin, a **Bechtel Incorporated** vice president, has been named division manager, Hydro & Community Facilities Division. He replaces **John P. Buehler,** vice president, who has retired after 40 years in the engineering profession. Mr. Buehler will continue as executive consultant on rapid transit projects.

David B. McBrayer has joined **Dalton-Dalton-Little-Newport,** Cleveland, as an associate and transportation project manager. McBrayer, who was responsible for transit projects throughout the midwest for **A.M. Voorhees,** was resident project director for the Five-County Transit Study in Cleveland, Ohio.

A.W. Scullen has been appointed proposal engineer-transit signaling markets, **Union Switch & Signal Divison, WABCO,** Swissvale, Pa. Mr. Scullen joined WABCO in 1952 and was a field coordinator working with New York City Transit Authority installations prior to his current assignment.

Roger T. Welcome has joined the transportation division of **Kaiser Engineers** as staff specialist for transit system specifications. Mr. Welcome was previously chief of the specifications department, **Metropolitan Atlanta Rapid Transit Authority** project with Parsons Brinckerhoff-Tudor-Bechtel.

L.A. Kimball has been appointed the first deputy administrator, **Mass Transit Administration, State of Maryland Department of Transportation,** Baltimore. Mr. Kimball was formerly assistant general manager, **Bay Area Rapid Transit District,** Oakland, Calif. for 10 years.

Walter S. Bellian has been appointed sales and service manager, rail passenger equipment, **Hawker Siddeley Canada Ltd.,** Canadian Car Division. Mr. Bellian, **Norman W. Kuster,** research and development manager, and **William D. Brown,** service manager, are located in Toronto, Ont. Mailing address is P.O. Box 6001, Toronto A.M.F., Ont., Canada L5P 1B3.

William D. Volkmer has joined **Kaiser Engineers'** transportation division as project engineer. Mr. Volkmer has been assigned to the team supervising assembly of vehicles for Boston's light rail vehicle program at the Philadelphia plant. Mr. Volkmer was previously a customer service engineer, transportation systems product department, **General Electric Co.**

OBITUARY

Frank J. Stanton, 54, director of personnel and public relations for the **Western Railroad Association,** died Dec. 31 at Northwest Community Hospital, Arlington Heights, Ill. He began his railroad career in 1946 with the New York Central and joined the Association of Western Railways, predecessor of WRA, in 1948.

NEW!

RAILS COMPANY
HAB-HP
SWITCH HEATERS

Proven in use
at sub zero temperatures

High pressure blower distributes hot air steadily, evenly, through a duct and nozzles—keeps switch points operating in all weathers.

All components located for easy installation and servicing—separate remote control panel is free from trackside vibration. Hot air duct is electrically insulated against track circuit interference and designed to provide maximum air flow.

Manual or automatic operation. Oil fired, natural gas or propane models available.

Write or call for detailed information.

THE RAILS CO. Maplewood, N.J. 07040 • Omaha, Neb. 68102
Chicago, Ill. 60604 • San Francisco, Calif. 94105
In Canada: IEC-Holden, Ltd.

SERVICE TESTED FOR DEPENDABLE OPERATION.

Circle 17 on Reader Service Card

THE
sea view

One of America's truly superior hotels. Private ocean beach and cabanas. Superb cuisine. Modified American or European Plan. Individual rooms and suites. Garage and servants' quarters on premises. Accommodations by advance reservation only. Address inquiries to G. S. Pickard, General Manager.

On the Ocean, Bal Harbour
MIAMI BEACH

Circle 19 on Reader Service Card

GOOD TRACK GOOD SERVICE

COAST TO COAST...

Let Speno show you the way to get significantly more ton miles of service from your rails. Send for FREE Booklets on Speno Ballast Cleaning and Speno Rail Grinding.

Ballast Cleaning • Rail Grinding

"Just Ask the Railroads That Use Our Services"

Frank Speno Railroad Ballast Cleaning Company, Inc.
306 North Cayuga St., Ithaca, New York 14850
Clark St. Box 219 East Syracuse, New York 13057

Speno International, S. A.
22 Parc Chateau Banquet, Geneva, Switzerland
(For Rail Grinding Outside the North American Continent)

MEMBER RPI IEC-Holden Ltd.
8180 Côte de Liesse Road.,
Montreal, 376 P. Q., Canada

Circle 18 on Reader Service Card

RAILWAY AGE
ADVERTISING
SALES DEPARTMENT

Chicago, ILL. 60602
29 E. Madison St.
(312) 641-5815
Reid Kenedy—vice president—sales
John M. Brennan
regional sales manager

New York, N.Y. 10013
350 Broadway
(212) 966-7700
W. Arthur Cubbage
regional sales manager

Pittsburgh, Pa. 15237
1514 Northway Mall
(412) 366-0100
Ronald M. Giallonardo
regional sales manager

Dallas, Tex. 75206
Noel Page Building
6400 N. Central Expressway
(214) 361-6972
Joseph Sanders

Los Angeles, Cal. 90025
11704 Wilshire Blvd.
(213) 477-4004
Fred Klaner, Jr.
Philip O. Bowers

Ormond Beach, Fla. 32074
750 Lindenwood Circle, East
(904) 672-6031
C. James Fisher
regional sales manager

Sausalito, Cal. 94965
3030 Bridgeway Building
(415) 332-1481
(415) 332-1482
Lewis A. Vogler

London S.W. 1Y6, England
01-839 6318
67/68 Jermyn St., St. James's
Kenneth J. Hendry
B.A. Leckie

Manchester M225RQ, England
Haletop
Wythenshawe Civic Center
Ian Goulden
John M. Spence

Paris, 8e, France
70 Rue de Ponthieu
Stephen Brown-Joussard
Francois Nadaud

4 Dusseldorf-Nord
Eitelstrasse 32
E. Hillerbrand
Ronald Fischer
G. Schneider
H.F. Olias du Bosque

Tokyo, Japan
Sun Gain Shia, Ltd.
Shiba Nikkatsu Bldg.
13, Shiba Park
Minato-Ku
C.H. Yiu, Managing Director

CLASSIFIED ADVERTISING

WANTED: Twenty-five pulpwood rack cars in good condition. Interested in leasing for one or more years. Address replies to:

BOX 248
RAILWAY AGE, 350 Broadway
New York, N.Y. 10013

R. R. TRACK MATERIAL
Rail-Frogs-Points-Spikes-Bolts-Anchors-Steel
Ties-Anything for trackwork needs.
RELAY OR NEW
LEFTON IRON & METAL CO.
Phone: 314-241-7100
P.O. Drawer 151-205 S. 17th St., E. St. Louis, Ill. 62202
REMSA
MEMBER

FOR SALE

NEW Orton Diesel Locomotive Cranes 25-T & 50-T Capy. for either 36", 39-3/8" or 42" Gauge. Especially adaptable for steel mills. Specs on request.

Striegel Supply & Equipment Corp.
6001 Chemical Road, Baltimore, Md. 21226 Tel. 355-7922, 7923

Price Increase
The technical training lessons of
The Railway Educational Bureau
will be increased from $3.20 to $3.50 each
...Effective January 1, 1975

ASSISTANT AUDITOR

Progressive short-line railroad in Southwest seeks qualified candidate with appropriate degree, plus 3-5 years experience, to understudy present Auditor. Please submit detailed resume to:
BOX 250
RAILWAY AGE, 350 Broadway
New York, N.Y. 10013
Equal Opportunity Employer

Advertisers Index

ACF Industries, Inc. 11
American Steel Foundries . . . . . IFC
Bethlehem Steel Corporation 13
Ciba-Geigy Corporation 20-21
Difco, Inc. 9
ESB, Inc. 36
General Railway Signal Co. 3
Hawker Siddeley Canada, Ltd. 19
Isco Manufacturing Company 35
The Kerite Company . . . . . IBC
Knorr-Brake Corp. 26
MLW Industries 4
H.K. Porter 15
The Rails Co. 42
Safety Electrical Equipment Corp. . . . . BC
The Sea View Hotel 42
Frank Speno RR Ballast Cleaning Co. 42
The Third Rail 34
Vapor Corp. 39
Westinghouse Air Brake Co. 24-25
Whiting Corporation 6

. . .Professional Directory. . .

TRANSPORTATION STUDIES AND REPORTS
• *Rapid Transit* • *Maintenance*
• *Railroad* • *Mergers*
• *Transit Bus* • *Acquisitions*
• *Operations* • *Valuations*
COVERDALE & COLPITTS, INC.
Transportation and Industrial Consultants
140 Broadway, New York (212) 943 7400

. . .Professional Directory. . .

HARRY F. ORTLIP COMPANY
ELECTRICAL ENGINEERS AND CONSTRUCTORS
FOR THE
RAILROAD INDUSTRY
Forty Years Experience In Electrical Installations, Including Catenary and Power Systems.
50 N. 18th St., Phila., Pa. 19103 215-LO-4-4800

DCO The De Leuw, Cather Organization CONSULTING ENGINEERS
165 W. WACKER DRIVE • CHICAGO 60601
SUBWAYS • RAILROADS • PUBLIC TRANSIT • TRAFFIC • PARKING • HIGHWAYS • BRIDGES
PORT DEVELOPMENT • AIRPORTS • COMMUNITY PLANNING • URBAN RENEWAL
MUNICIPAL WORKS • INDUSTRIAL BUILDINGS • ENVIRONMENTAL POLLUTION CONTROL
ATLANTA • BOSTON • BUFFALO • NEWARK • NEW YORK • OKLAHOMA CITY • PHILADELPHIA
SAN FRANCISCO • SEATTLE • WASHINGTON, D.C. • BANGKOK • BEIRUT • SYDNEY

Railroads • Rapid Transit • Electric Traction Power •
Signals and Train Control • Communications • Substations •
Power Generation • Urban Planning • Environmental Protection
Gibbs & Hill, Inc.
ENGINEERS DESIGNERS CONSTRUCTORS
393 Seventh Avenue, New York, NY 1001
A Subsidiary of Dravo Corporation

PARSONS BRINCKERHOFF QUADE DOUGLAS
Engineers
Designers Planners
Evaluations & Operations Studies
Bridges • Terminals
Rapid Transit Systems
ONE PENN PLAZA, NEW YORK, NY 10001
Atlanta, Boston, Denver, San Francisco, Trenton, Washington, DC

TRANSPORTATION CONSULTANTS
STONE & WEBSTER
Management Consultants, Inc.
90 Broad St. New York, N.Y. 10004
212-269-4224

MATEP Eqs pamentos
matep s.a.
Manufacturer's Representatives in BRAZIL
Main Office: 79 Rua da Candelaria, 10th & 11th floors.
Rio de Janeiro, GB, Brazil
Cable Address: OILMATEC
Telephones: 243-4851-4,223-9089,243-6951
Railroad Department: Inquiries to the attention of J.R. Maligo, Vice-President

URBAN ENGINEERS, INC.
Consultants • Planning and Design
Rapid Transit • Airports • Railroads • Bridges • Highways
Structures • Roadway • Terminal • Station Facilities
Environmental Impact Studies • Construction Management
19th & Delancey, Philadelphia, Pa. 19103
Baltimore • Buffalo • Erie • Camden • Washington, DC

TRANSPORTATION CONSULTANTS

PUBLIC TRANSIT	RAILROADS	TRUCKING	INDUSTRIAL
•Operations	•Acquisitions and Mergers		•Planning
•Valuations	•Reorganizations		•Financial

WYER, DICK & CO.
(A Subsidiary of Edwards and Kelcey, Inc.)
New York, Boston, Minneapolis, Philadelphia, Sao Paulo, Madrid, London
Central Office: 8 Park Place, Newark, N.J. (201) 621-7050

Viewpoint

Going into '75: All the trends aren't bad

While it is true that one swallow doth not summer make, it is also true that one is better than none—and right now a couple of harbingers of a favorable change in the climate are discernible on the railroad horizon. It is our purpose here, in a season of almost unrelieved gloom, to take cautiously optimistic note of them.

—Although the computers have not yet churned out their final verdict on '74, there is good reason to believe, says the Association of American Railroads, that rails carried a larger share of the total national freight package last year than they did the year before—and that the share of the intercity truckers dropped correspondingly. This turnaround, an acceleration of a trend that began to be evident two or three years ago, could prove to be of far greater importance than any of the ephemeral difficulties now confronting all transportation modes. (To be sure, this silver lining has its cloud: On Jan. 4, President Ford signed into law the 1974 Highway Act, which increased by around 10% the tonnages which with which truckers are permitted to clobber the Interstate Highway System. The American Automobile Association was among those groups that unsuccessfully urged the President to veto the big-truck bill, whose path through the 93rd Congress was blitzed, according to the Washington Star-News, by "a lobbying drive that included last-minute campaign contributions to 113 members of the House." There was considerable feeling that the new Congress early in 1975 would reconsider, revote and revoke this hastily-wrapped Christmas present to the concrete and rubber lobby.)

—Further evidence that America's love affair with concrete may be cooling came from no less an authority than the Federal Highway Administration, which reported in January that motor vehicle travel on roads and streets had declined by 3% in 1974—to 1,270 billion miles from the previous year's 1,309 billion. Amtrak, at the same time, was reporting an increase of nearly 22% in passenger miles in 1974, and this came on top of an increase of similar magnitude in 1973. Meanwhile, public transit ridership, according to the American Public Transit Association, was rising by 7.8%, following an increase of 0.4% the previous year when a long decline was arrested and reversed. True, highway travel was down only slightly from a very large base, and Amtrak and public transit ridership were up from comparatively small bases. Still the trend *was* upward—for the first time since World War II.

AND THEN THERE'S INFLATION

Going into 1975, the railroads also have their share of unfavorable trends. By far the most serious of these is the rising cost of everything that goes into running a railroad. The article on p. 10 of this issue describes what happened to railroad prices last year: railroads paid 106% more for diesel fuel, 45% more for crossties, 42% more for rail, 62% more for car wheels (when they could find them at any price), 47% more for sheet steel than they paid in 1973.

On the other hand, the railroads themselves won substantial increases in 1974 for the prices they charge—importantly, a 10% rate increase in the landmark Ex Parte 305-A case, in which the ICC recognized the industry's need not only to cover rising costs but to build up investment capital. Thus, while ton-miles were only holding steady with 1973's record levels, revenues in 1974 were up 15%, and the rate of return on investment rose from 3% to 4%. Not enough, not nearly enough—but again, the trend, for a change, was in the right direction.

RAILWAY AGE

READER SERVICE CARD

This card usable for 90 days from date of issue.

FREE: More information on: products and equipment in

Advertisements
New Products Report
New Literature Section

Just circle numbers on attached postage-paid card, matching those under the ads, new products or literature that interest you.

Print your name, title, company name and address. (Readers outside the U.S., please affix correct postage).

Please fill in classification at bottom of card.

Put in the mail—we'll do the rest. Express Service processing will speed your inquiry to the proper firm.

—the editors

Name _____ Title _____

Railroad or Firm _____

Street _____

City _____ State _____ Zip _____

1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	18
19	20	21	22	23	24	25	26	27
28	29	30	31	32	33	34	35	36
37	38	39	40	41	42	43	44	45
46	47	48	49	50	51	52	53	54
55	56	57	58	59	60	61	62	63
64	65	66	67	68	69	70	71	72
73	74	75	76	77	78	79	80	81
82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99
100	101	102	103	104	105	106	107	108
109	110	111	112	113	114	115	116	117
118	119	120	121	122	123	124	125	126
127	128	129	130	131	132	133	134	135

CLASSIFICATION INFORMATION
Please circle letters on data which apply to you.

FUNCTION
- A Executive
- B Operations
- C Purchasing
- D Mechanical
- E Engineering
- F Sig. & Comm.
- G Traffic Mgt.

BUYING INFLUENCE
- H Recommend
- I Specify
- J Approve
- K None

RAILWAY AGE January 13, 1975

Enter my subscription to **RAILWAY AGE**

☐ 1 yr. $8.00

☐ 2 yrs. $12.00

Above rates apply for railroad, rail rapid transit and freight traffic employees.

All others

☐ 1 yr. $17.00

RAILWAY AGE

READER SERVICE CARD

See other side of this card for FREE additional information on products and equipment in the issue's

Advertisements

New Products Report

New Literature Section

Use the postage-paid reply card to obtain further details on products that interest you.

—the editors

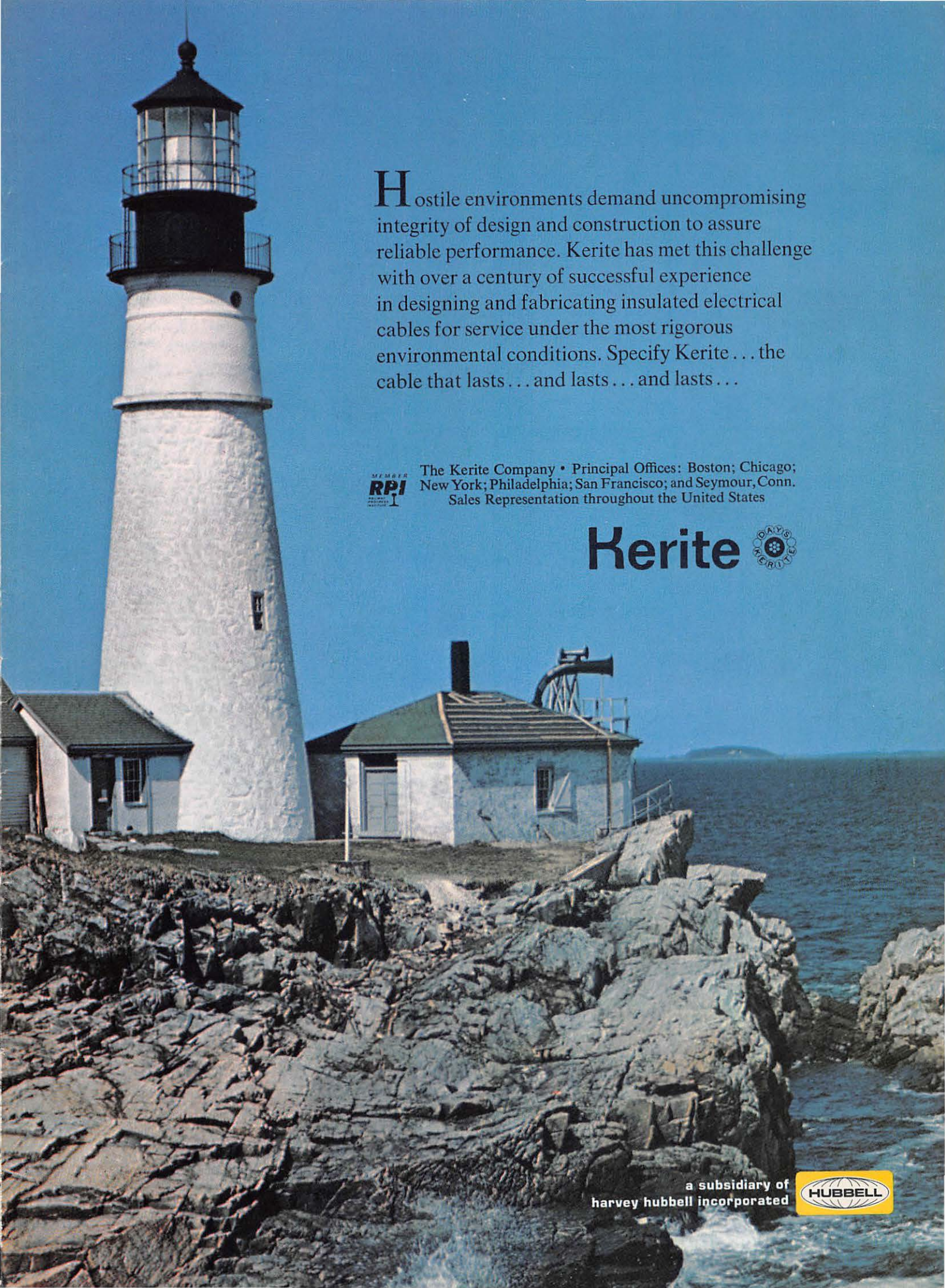
First Class
Permit No. 153
New York, N.Y.

BUSINESS REPLY MAIL
NO POSTAGE STAMP REQUIRED IF MAILED IN THE U.S.A.

Postage will be paid by:

Railway Age
P.O. Box 530
Bristol, Conn. 06010

Reader Service Dept.


Hostile environments demand uncompromising integrity of design and construction to assure reliable performance. Kerite has met this challenge with over a century of successful experience in designing and fabricating insulated electrical cables for service under the most rigorous environmental conditions. Specify Kerite . . . the cable that lasts . . . and lasts . . . and lasts . . .
MEMBER RPI
The Kerite Company • Principal Offices: Boston; Chicago; New York; Philadelphia; San Francisco; and Seymour, Conn.
Sales Representation throughout the United States
Kerite
DAYS KERITE
a subsidiary of
harvey hubbell incorporated
HUBBELL

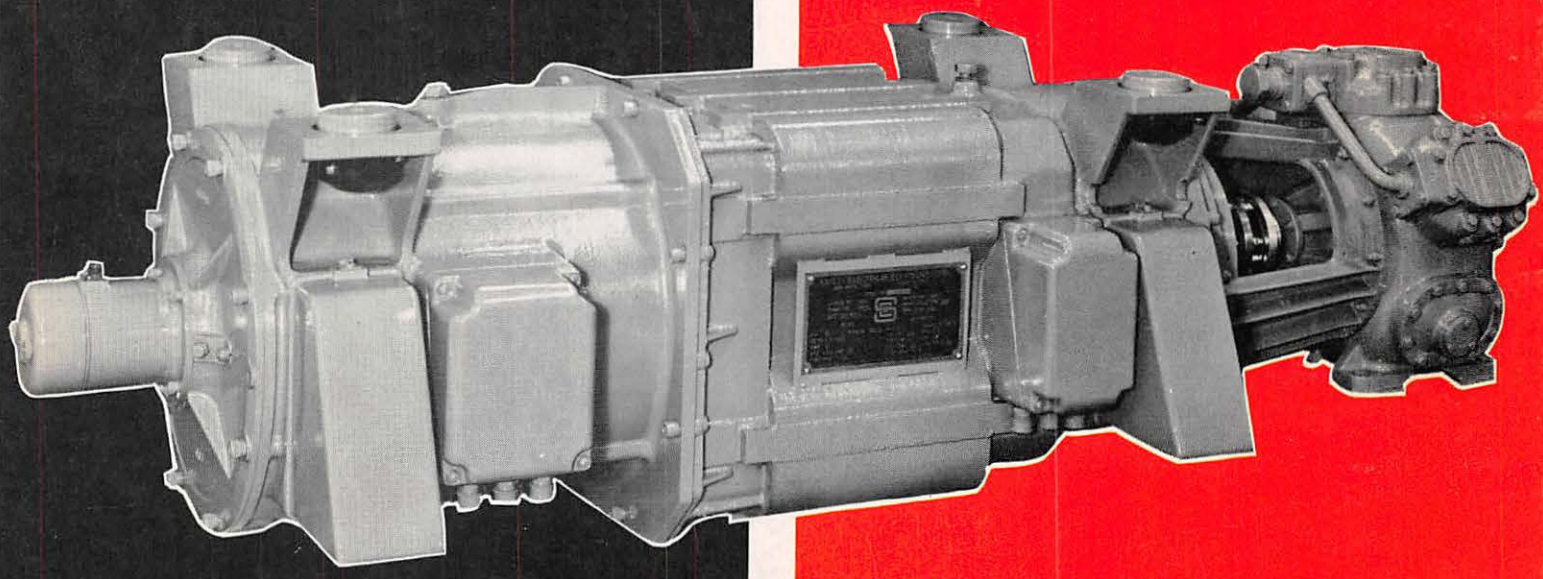
Safety

AUXILIARY POWER SYSTEMS

Ground Transportation Specialists

Plan and depend on "Safety" Auxiliary Power Systems — choose from motor alternators, motor generators, battery chargers, genemotors or caboose generators — all supplied with essential precision controls. Insure efficient and dependable operation — use "Safety" — the specialists in railroad power generation and regulation systems.

Write us for details on Systems with input voltages of 15 volts to 1,000 volts D.C.



SAFETY ELECTRICAL EQUIPMENT CORP.

1187 DIXWELL AVE., NEW HAVEN, CONN. 06514

Tel: (203) 865-3171 Telex: 963454

NEW YORK • CHICAGO • PHILADELPHIA •
SAN FRANCISCO • NEW HAVEN • MONTREAL

"Safety" Products include: Air Conditioning Equipment • Genemotors • Generators • Fans • Regulators • Blower Units • Motors • Motor Generators • Motor Alternators • Transportation Gearing • Static and Electromechanical Control Equipment.

Circle 2 on Reader Service Card